

# THE ORIGIN, DEVELOPMENT AND MEANING OF THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

by Bernard O'Kane

“AS so often when one type of building is said to ‘change’ or be ‘converted’ into another, the statement means no more than that the metamorphosis can be effected on paper.”<sup>1</sup> The warning above is particularly apt in the case of this paper, which concerns itself with tracing connections and continuities in a particular ground plan, the square or slightly rectangular room with four piers or columns, over millennia. To take the example of two buildings closely related even in time and place, al-Ashraf Barsbay (1432) and Maḥmūd Pāshā (1567) are small Cairene mosques with this type of nine-bay plan (Figs. 1-2), sharing even a corridor through their central space, yet their elevation (Pls. 1-2)<sup>2</sup> shows that they have radically different concepts of space. For several early buildings in the series the evidence of excavations reveals only the similarities in plan and nothing of the system of roofing where these differences might emerge. This needs to be kept in mind, although I should admit from the outset that the discontinuities between apparently similar plans are as much a part of my conclusions as the continuities.

With the discovery of the Hājji Piyāda mosque at Balkh in the 1960s came the realisation that the nine-bay plan was widely distributed in the later ‘Abbasid period, with examples occurring, for example, in Toledo, Qayrawan, Susa, Cairo, Aswan and Transoxiana (see Table 1 below). The first discussions of its diffusion occurred in connection with the publications of this mosque, and were primarily concerned with establishing typological relationships between similar examples.<sup>3</sup> Two more recent studies have argued for particular meanings for the nine-bay plan. Terry Allen has suggested that it was a new architectural type which was created by

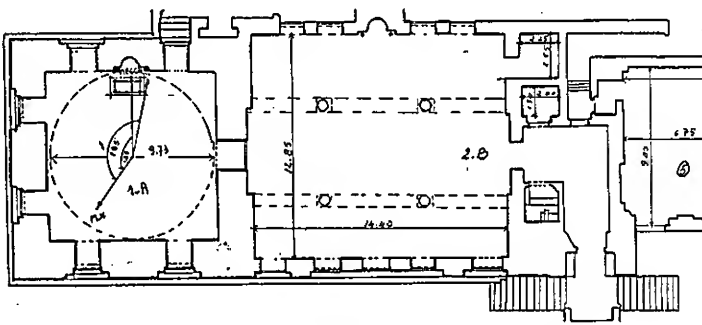


Figure 1 Cairo, al-Ashraf Barsbay complex,  
mosque/madrasa, 1435, plan (after Fernandes)

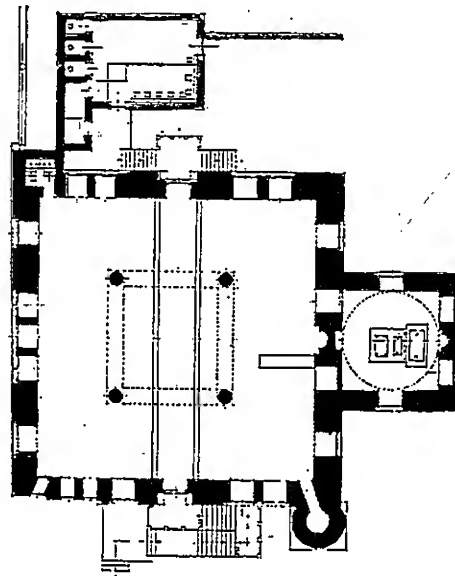


Figure 2 Cairo, Maḥmūd Pāshā mosque,  
1567, plan (after El Rasidi)

<sup>1</sup> Henri Frankfort, *The Art and Architecture of the Ancient Orient*, Harmondsworth, 1970, p. 410n. 56.

<sup>2</sup> Rather than round up the usual suspects, which have been frequently published in other discussions of the nine-bay plan, I have preferred to illustrate, for the most part, lesser-known buildings here.

<sup>3</sup> Lisa Golombek, "Abbasid Mosque at Balkh," *Oriental Art*, N.S. 15, 1969, pp. 173-89; G. A. Pougachenkova, "Les monuments peu connus de l'architecture médiévale de l'Afghanistan," *Afghanistan* 21, 1968, pp. 18-27; A. S. Melikian-Chirvani, "La plus ancienne mosquée de Balkh," *Arts Asiatiques*, 20, 1969, pp. 2-20; Richard Ettinghausen, *From Byzantium to Sasanian Iran and the Islamic World: Three Modes of Artistic Influence*, The L. A. Mayer Memorial Studies in Islamic Art and Archaeology 3, ed. R. Ettinghausen and O. Kurz, Leiden, 1972, pp. 55-8; Christian Ewart, "Die Moschee am Bab al-Mardum im Toledo. Eine 'Kopie' der Moschee von Córdoba," *Madrid-Mitteilungen* 18, 1977, pp. 329-51.

reproducing the most essential part of a congregational mosque plan, the bays in front of the mihrab (as in the Great Mosque in Wasit, Iraq). This space, the core of the mosque, it is argued, is that which marked off the space in which official ceremonial took place, and this ceremonial function was linked with the form of the nine-bay plan.<sup>4</sup> Another article, by Geoffrey King, has stressed the common descent of the type from the bath hall of Khirbat al-Mafjar, invoking it as an example of an honorific building type and suggesting that this honorific connection was passed on to the nine-bay type.<sup>5</sup> Writing ten years ago, it was still possible to say that "the exact origin of the nine-domed form unfortunately remains a mystery."<sup>6</sup>

In this paper I will suggest that the explanation for its popularity is simpler. I propose that the form is much more widespread than has been previously thought, and that, rather than being an 'Abbasid invention, it should be seen as a variation on Umayyad and pre-Islamic plans. I submit that the extraordinary geographical and temporal diversity within which the nine-bay plan is found (which by no means stopped in the medieval period) is caused not so much because of a necessary interrelationship between all of the examples, but because the plan's inherent practicality, economy and aesthetic appeal (especially in terms of symmetry) is such that builders must have been intuitively drawn to it.



Plate 1 Cairo, al-Ashraf Barsbay complex, mosque/madrassa (1435), interior

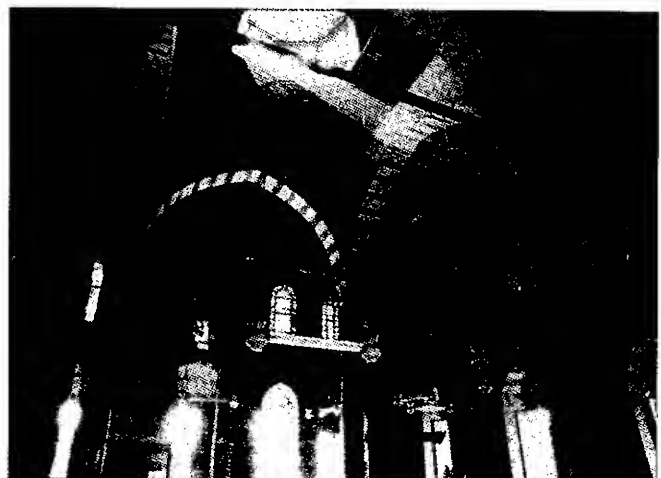


Plate 2 Cairo, Maḥmūd Pāshā mosque (1567), interior

### Neighbourhood Mosques

I will begin by considering a separate but related topic. Almost all nine-bay mosques are neighbourhood as opposed to congregational ones. As already noted by Terry Allen, much of the early evidence for the nine-bay plan comes from the Darb Zubayda, the caravan route from Kufa to Mecca whose monuments are thought to have been built by Zubayda, the wife of Harun al-Rashid, in the eighth century. They provide us with an unri-

<sup>4</sup> Terry Allen, *Five Essays on Islamic Art*, n.p., 1988, pp.70-83; *idem*, "Early Nine-Bay Mosques," unpublished manuscript—I am most grateful to the author for sending me a copy of the latter.

<sup>5</sup> Geoffrey R. D. King, "The Nine Domed Mosque in Islam," *Madriider Mitteilungen* 30, 1989, pp. 332-90.

<sup>6</sup> James W. Allan and K. A. C. Creswell, *A Short Account of Early Muslim Architecture*, Cairo, 1989, p. 418.

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valled corpus of twenty-five more or less complete neighbourhood mosques (Figs. 3-5).<sup>7</sup> Although the origins and development of the congregational mosque (*jāmi'*) in the Islamic world have been the subject of continuous study, very little attention has been devoted to early neighbourhood mosques (*masjids*). There are good reasons for this, chief among them being survival, prestige and artistic value. However, with the increase of Islamic archaeology in recent decades, sufficient material has become available to analyse typologies and formulate hypotheses regarding the development of smaller mosques and the role that nine-bay plans played in their development.<sup>8</sup> In addition to the Darb Zubayda examples the slightly later group of six neighbourhood mosques from Samarra has also never been considered in its entirety,<sup>9</sup> and to them we can add the corpus of eighteen neighbourhood mosques dating from the 9th to the 12th centuries excavated at Siraf.<sup>10</sup>

### 'Abbasid Neighbourhood Mosques

The simplest mosque plan, as one would expect, is an undivided room. Along the Darb Zubayda this occurs in one case as a single component of a larger building (Fig. 3.11), or, in several instances, as an isolated rectan-

<sup>7</sup> James Knudstad, "The Darb Zubayda Project: 1396/1976. Preliminary Report on the First Phase," *Atlat* 1, 1977, pp. 41-68; Khalid al-Dayel, and Salah al-Helwah, "Preliminary Report on the Second Phase of the Darb Zubayda Reconnaissance 1397/1977," *Atlat* 2, 1978, pp. 51-64; Khalid al-Dayel, Salah al-Helwah and Neil MacKenzie, "Preliminary Report on the Third Season of Darb Zubaydah Survey 1978," *Atlat* 3, 1979, pp. 43-54; Neil D. MacKenzie and Salah al-Helwah, "Darb Zubayda Architectural Documentation Program. a. Darb Zubayda-1979: a Preliminary Report," *Atlat* 4, 1980, pp. 37-50; Craig A. Morgan and Salah M. al-Helwa, "Preliminary Report on the Fifth Phase of Darb Zubayda Reconnaissance 1400 A.H./1980 A.D.," *Atlat* 5, 1981, pp. 85-107; Salah al-Helwah, Abdalaziz A. al-Shaikh and Abduljawwad S. Murad, "Preliminary Report on the Sixth Phase of the Darb Zubaydah Reconnaissance 1981 (1401)," *Atlat* 6, 1982, pp. 39-62; Sa'ad bin 'A. al-Rashid, *Darb Zubaydah. The Pilgrimage Road from Kufa to Mecca*, Riyadh, 1980; Sa'ad bin 'A. al-Rashid, *Al-Rabadhah*, Riyadh, 1986.

For convenience the sites with mosques are listed alphabetically:

Abu Rawadif: *Atlat* 4, 46, pl. 49A  
 al-'Amya': *Atlat* 6, 61, pl. 78  
 al-'Aqīq: *Atlat* 2, 62, pl. 51; al-Rashid, Darb Zubaydah, 276  
 al-'Arā'ish Middle: *Atlat* 5, 104, pl. 108C  
 al-'Arā'ish South: *Atlat* 5, 102, pl. 108B  
 al-'Ashar: *Atlat* 6, 43, pl. 64  
 Barud: *Atlat* 1, pl. 39A  
 al-Bida': *Atlat* 5, 98, pl. 106B  
 al-Dariba: *Atlat* 2, 59, pl. 59B  
 Fayd (near Qasr Khrash): Al-Rabadhah, loose plan  
 al-Humayma North: *Atlat* 4, 41, pl. 38  
 al-Humayma South: *Atlat* 4, pl. 35  
 Hurayd: *Atlat* 4, 41, pl. 40A  
 al-Jaffaliyya B: *Atlat* 4, 44, pl. 42  
 al-Kharāba: *Atlat* 2, 63, pl. 50  
 Kurā': *Atlat* 3, 46, pl. 32A  
 Ma'dan Banī Sulāim, *Atlat* 3, 47, pl. 34A  
 al-Makhrūqa, *Atlat* 4, 44, pl. 45; 45, pl. 47  
 al-Qā': *Atlat* 6, 60, pl. 77A  
 al-Rabadha: Al-Rabadhah, figs. 35-7  
 al-Saq'a: *Atlat* 3, 52, pl. 38  
 al-Sāqiyya: *Atlat* 4, 49, pl. 53B  
 Shamāt Kibd, *Atlat* 5, 95, pl. 105  
 Sināf al-Lahm: *Atlat* 4, 38, pl. 36  
 al-Thulayma: *Atlat* 6, 58, pl. 76  
 Umm al-Damīrān: *Atlat* 1, 65, pl. 47  
 al-Wausayt East: *Atlat* 5, 92, pl. 104  
 al-Wausayt West, *Atlat* 5, 94, pl. 103  
 al-Zafīrī, *Atlat* 6, 62, pl. 79  
 Zubāla, *Atlat* 6, 54, pl. 72.

<sup>8</sup> A preliminary discussion of these was published in Bernard O'Kane, "Mosque," *The Oxford Encyclopaedia of Archaeology in the Near East*, ed M. Meyers, Oxford, 1997, 4, pp. 55-8.

<sup>9</sup> K. A. C. Creswell, *Early Muslim Architecture*, 2 vols., Oxford, 1940-69, (henceforth *EMA*), 2, fig. 214; Alisdair Northedge, "An Interpretation of the Palace of the Caliph at Samarra (Dar al-Khilafa or Jawsaq al-Khaqani)," *Ars Orientalis* 23, 1993, fig. 2, H335.

<sup>10</sup> David Whitehouse, *Siraf III. The Congregational Mosque and Other Mosques from the Ninth to the Twelfth Centuries*, London, n.d., pp. 30-57.

gular structure (Fig. 3.1-2 [in both of these the wall opposite the qibla has not been preserved], Fig. 3.3-4), usually with three entrances on the side opposite the qibla (Fig. 3.5-7). At Samarra this plan is found in the smaller of the two mosques at the Balkuwara palace, in the eastern courtyard.<sup>11</sup> The mosque at site F at Siraf had two entrances leading into a square room, while that at site P2, period 1, was rectangular with, exceptionally, the mihrab on the narrow side.

In other cases courtyards have also been preserved, at least in part, in front of a single room (Fig. 3.8-10), and in two examples the piers of the wall opposite the qibla show that the three entrances corresponded to a division of the interior into three bays perpendicular to the qibla (Fig. 4.1-2). The four mosques within the Dār al-Khilāfa at Samarra all seem to have been single rooms with triple entrances preceded by a courtyard; the tripartite entrance is clearly preserved in one example, and partially preserved in another.<sup>12</sup> At Siraf a courtyard is present definitely in only one example and the number of entrances (from one to three) and the interior division of space (arcades parallel to the qibla with one, two or four columns) is more variable.<sup>13</sup>

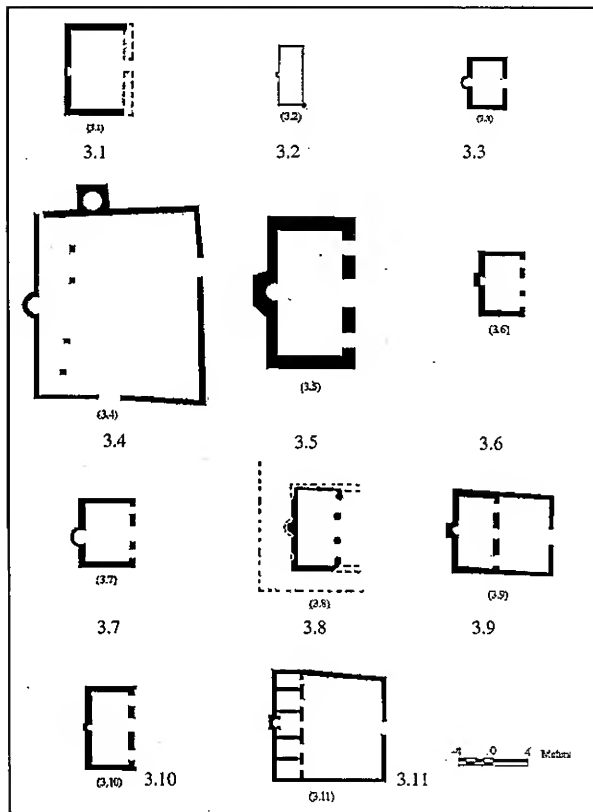


Figure 3 Darb Zubayda, Table of plans (after *Atīl*): single rooms: a) without courtyard 3.1 al-Bida', 3.2 Fayd (near Qaṣr Khrash), 3.3 Shamat Kibd, 3.4 Zubāla 1, 3.5 al-Makhrūqa, 3.6 al-Humayma South, 3.7 Hurayd b) with courtyard, 3.8 al-Kharāba, 3.9 al-Humayma North, 3.10 Abu Rawādif c) single room in larger building, 3.11 al-'Amya'

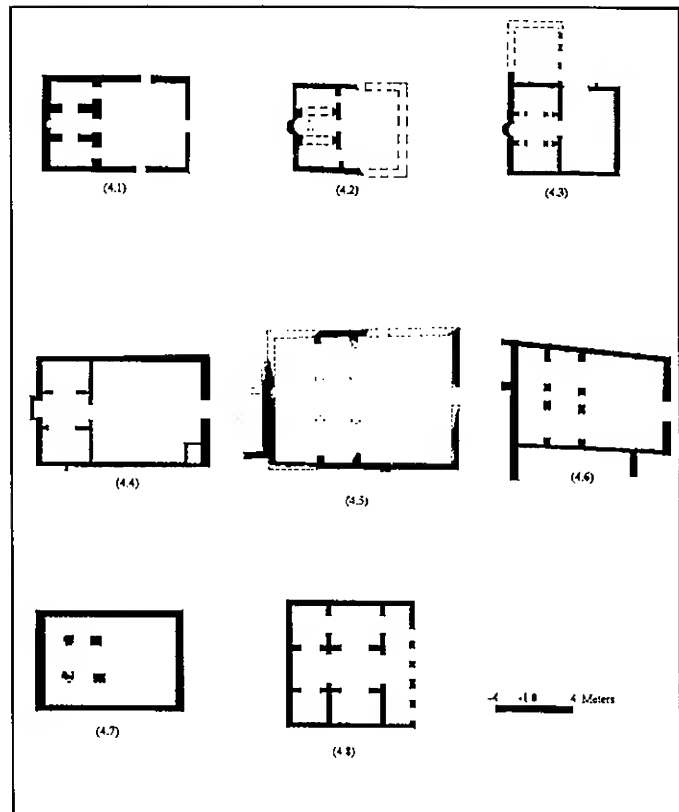


Figure 4 .1 Three-bay (all with courtyard) al-Sāqiyya, 4.2 al-Jaffaliyya B, 4.3 al-'Arā'ish South, 4.4 al-Qā' six-bay, two aisle, 4.5 al-Darība, 4.6 al-'Ara'ish Middle, 4.7 al-Thulayma, 4.8 al-Zafīrī f) six-bay, one-aisle, 4.9 Zubāla 2

<sup>11</sup> Creswell, *EMA*, 2, fig. 214.

<sup>12</sup> Northedge, "An Interpretation," fig. 2, H 287 and H335; shown in greater detail in Creswell, *EMA* 2:fig. 194.

<sup>13</sup> Whitehouse, *Siraf*.

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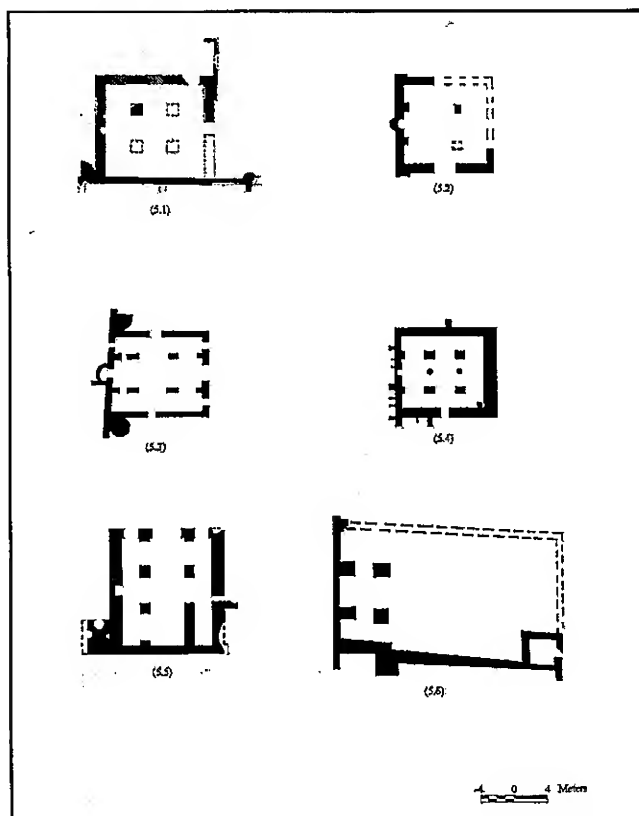


Figure. 5.1 Nine-bay Umm al-Damīrān, 5.2 Sināf al-Laḥm, 5.3 Kurā', 5.4 all-Rabadha, 5.5 al-'Aqīq, 5.6) al-Qā'

Two other mosques of the Darb Zubayda show the tripartite interior division, but with only one entrance from the courtyard (Fig. 4.3-4).<sup>14</sup> What could be considered a natural expansion of this plan appears in the mosque at al-Darība (Fig. 4.5): a courtyard preceding a prayer hall of six bays, with an arcade of three arches on the courtyard facade and another within the prayer hall, both springing from engaged columns on the side.<sup>15</sup> This plan is also found as major element in three complexes which, while smaller than the usual *qaṣr* on the route, were the largest buildings of their site (Fig. 4.6-8). In one of the three (Fig. 4.8) the room enclosing the four piers is square rather than rectangular, which at first suggests that it might have been a nine-bay mosque without a courtyard. However, the T-shaped piers which are furthestest from the qibla suggest that a façade was present at this point, fronted by a diminutive courtyard.<sup>16</sup>

It is the nine-bay plan which seems to have been most common for the largest mosques on the route, those built on to the *qaṣrs*. In five of the *qaṣrs* the nine-bay plan is well or fairly well preserved, although in none of

<sup>14</sup> It is difficult to interpret the mosque at al-'Amya, which has a courtyard preceding five cells, the middle one of which has a mihrab. The central location of the mihrab would make an unlikely plan for a multifunctional building – could it be a five-bay mosque with later compartmentalizing walls?

<sup>15</sup> The mosque at Zubāla 2 is anomalous in that it had the six bays in one aisle, resulting in the mihrab being obscured by a pier.

<sup>16</sup> A problem in identifying these rooms as mosques is that most of them do not appear to have traces of a mihrab. Arguments for their identification as mosques are 1) the plan type is one that is more closely associated with recognised mosques on the Darb Zubayda than with any other type of building; 2) they are all qibla oriented (unlike many of their surrounding buildings); 3) there is a parallel with the rooms that were added on to the *qaṣrs*: the mihrabs in many of the latter prove they were mosques; the placement and similarity of ground plans in those without traces of a mihrab suggest they too were mosques. As noted by Allen, "Early Nine-Bay Mosques," n. 8, the published plans only represent the low stone course on which mudbrick walls were built. It is thus possible that the mihrabs were present within the thickness of the mudbrick walls above the stone courses.

them to the extent that the elevation can be deduced.<sup>17</sup> Two of them are roughly square (Fig. 5.1-2), while four are distinctly basilical (Fig. 5.3-6), two of which (Fig. 5.3, 5.5) have with engaged piers to either side of the four central ones emphasising the division into a wider nave and two aisles.<sup>18</sup> At al-'Aqīq (Fig. 5.5) the basilical derivation is the more obvious in that it is misaligned, the qibla being at right angles to the basilical orientation. The single nine-bay plan at Siraf<sup>19</sup> also has arcades parallel to the qibla, but with arcades of equal width. In six other cases along the Darb Zubayda not much more than the outlines of the corresponding room could be traced, with or without a mihrab (al-Wausayt West, al-Wausayt East, al-Makhrūqa, Ma'dan Banī Sulāīm, Barud, al-Saq'a, al-'Ashar). At al-'Ashar, and possibly at Umm al-Damīrān, the mosque may have been preceded by a narrow court or narthex.<sup>20</sup>

Surprisingly, only one variant of the "standard" hypostyle, with the qibla on the widest side of the building, was found along the Darb Zubayda. The western congregational mosque at al-Rabadha, one of the largest settlements along the route, has a prayer hall divided into two aisles by six columns parallel to the qibla, preceded by a courtyard with an arcade on each side. Finally, the larger of the two mosques at the Balkuwara palace at Samarra is an interesting hybrid consisting of a hypostyle prayer hall with two rows of eight columns, but, like many of the smallest mosques in our corpus, lacking a courtyard and with only three entrances on the side opposite the qibla.

It can be seen that the most important of the Darb Zubayda mosques, those attached to the *qasrs*, seem to have had prayer halls with nine bays. Should one see them as building on the smaller three-bay or six-bay examples, or should the latter be seen as reductions of the larger plan?

Before attempting to answer this it would be prudent to bring into the discussion the Umayyad precedents.

### Umayyad Neighbourhood Mosques

What light does the smaller corpus of Umayyad *masjids* throw on the 'Abbasid examples? We have no record of what the mosques of the early Muslim armies must have looked like, but as an alternative to prayers in the open air, the use of low stone courses as a directional marker is a likely early development. Not far removed from this are the hypaethral mosque plans at Wādī Jilat, a camp site where there are the remains of two stone walls with a mihrab between, or at al-Rīsha, a rectangle with three entrances and again a mihrab, where shade over the low walls may have been provided by means of tenting when the site was in use.<sup>21</sup> The incorporation of a niche mihrab in these two examples is no barrier to a date even before the reign of al-Walid (the usually assumed period of its introduction), as Noha Khoury has shown recently.<sup>22</sup> The plan of Umm al-Walid I cannot be completely verified, although the excavators assume that its rectangular walls may also have served as the basis for erecting tenting on one side.<sup>23</sup>

<sup>17</sup> Donald Whitcomb has published a very useful table of these *qasrs*, which he notes have plans similar to caravanserais: "The Darb Zubayda as a Settlement System in Arabia," *Aram* 8, 1995, pp. 31-2 and fig. 2.

<sup>18</sup> At Sināf al-Lahm and Rabadha and al-Qā' engaged piers in line with the central ones are preserved on the qibla wall. The plan of al-Qā' shows only these engaged piers and two others; given their large size it seems reasonable to assume that the complete plan was of a nine-bay mosque similar to the others in the series.

<sup>19</sup> *Ibid.*, fig. 25.

<sup>20</sup> Although at Umm al-Damīrān the thinner walls of the narthex suggest that it might have been a later addition.

<sup>21</sup> Svend Helms et al., *Early Islamic Architecture of the Desert: a Bedouin Station in Eastern Jordan*, Edinburgh, 1990, pp. 73-82. Jeremy Johns, "The 'House of the Prophet' and the Concept of the Mosque," in *Bayt al-Maqdis: Jerusalem and Early Islam*, Oxford Studies in Islamic Art 9 / 2, Oxford, 1999, refers to other possibly 7th - 8th century hypaethral mosques in the Negev and at Wādī Shira in the Jordanian Hisma, p. 81 and fig. 17.

<sup>22</sup> Noha Khoury, "The Mihrab: From Text to Form," *International Journal of Middle East Studies* 30, 1988, pp. 1-27.

<sup>23</sup> Jacques Bujard and Wilfried Trillen, "Umm al-Walid et Khan az-Zabib, cinq qusur omeyyades et leurs mosquées revisitées," *Annual of the Department of Antiquities of Jordan* 41 (1997), 355-6.

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The mosques at Qaṣṭal (reign of 'Abd al-Malik, 685-705) and Qaṣr Muqāṭil (late Umayyad or early 'Abbasid, before 762) are also rectangular, but the latter is similar to many of the Darb Zubayda examples in that it incorporates a courtyard which has a triple entrance leading into the covered area.<sup>24</sup> The Jabal Says mosque (c. 700-10) is a roofed square room,<sup>25</sup> but has a surprising feature: a single central column, which formed an arcade with two engaged columns on the side wall. This is logical from a structural point of view, but it has a severe drawback in that it obscures the view of the mihrab from the entrance opposite it.

The importance of an unrestricted view of the mihrab may be seen in the plans of three other Umayyad *masjids*, as Quṣayr al-Hallabat, Khan al-Zabīb and Umm al-Walid II (Figs. 6-8).<sup>26</sup> All of these are nine-bay plans, where in addition to the four piers in the centre of the square space, there are engaged piers or columns on the side walls linking the arcades to form a division into three aisles, recalling basilicas.<sup>27</sup>

This basilical form is, we may recall, also present in several of the Darb Zubayda nine-bay examples, making it less likely that they should be seen as a further agglomeration of the smaller three- or six-bay mosques. In fact, the compartmentalized plans of some of the three-bay examples (Fig. 4.2-4) would indicate that they are mere enlargements of the single room which was the simplest plan used.

### Pre-Islamic Nine-Bay Plans

The hall with four columns occurs as early as the beginnings of trabeate architecture. It is found in the second millennium BCE in a number of sites: at Lachish, near Jerusalem, in the 14th century, where it appears as the enlarged cella of a temple<sup>28</sup> and in the 12-11th century megaron at Tiryns,<sup>29</sup> an example of a pre-Hellenic

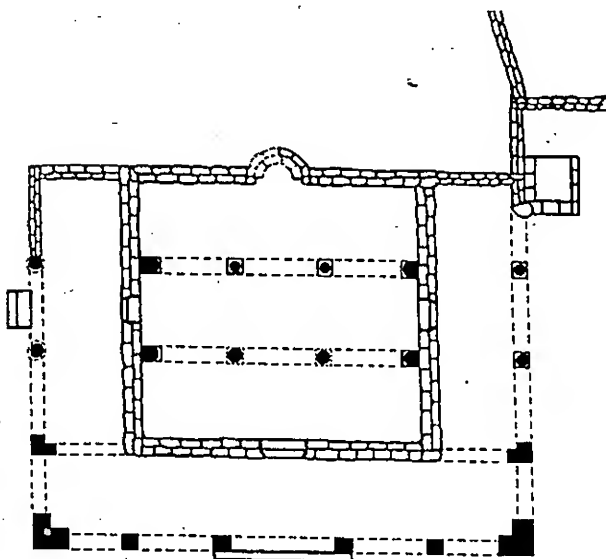


Figure 6 Quṣayr al-Hallabat (after Bisheh)

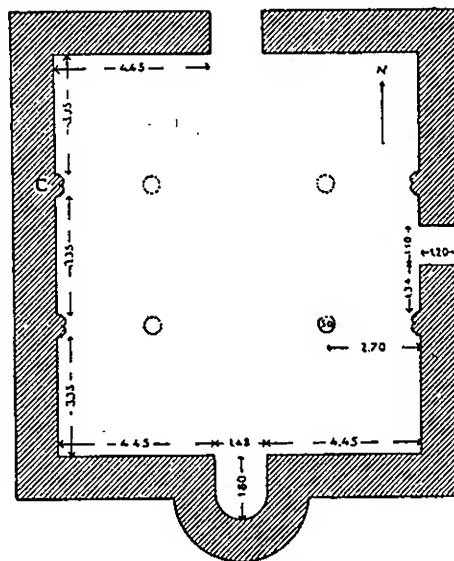


Figure 7 Khan al-Zabīb (after Brünnow and von Domaszewski)

<sup>24</sup> Helms, *Early Islamic Architecture*, fig. 26.

<sup>25</sup> Allan and Creswell, *A Short Account*, fig. 72.

<sup>26</sup> Bujard and Trillen, "Umm al-Walid et Khan az-Zabib," p. 356; J. Bujard, "Umm al-Walid," *Encyclopaedia of Islam*, 2nd. ed., 10:859 and fig. 3.

<sup>27</sup> Cf. the basilica of Theodosius I (379-95) at Ba'albak: Creswell, *EMA*, vol. 1 part 1, p. 193, fig. 97.

<sup>28</sup> P. Amiet, *Art of the Ancient Near East*, New York, 1980, pp. 472-3, fig. 836. The four columned room was the enlarged cella of a temple.

<sup>29</sup> André Godard, *The Art of Iran*, London, 1965, fig. 127.

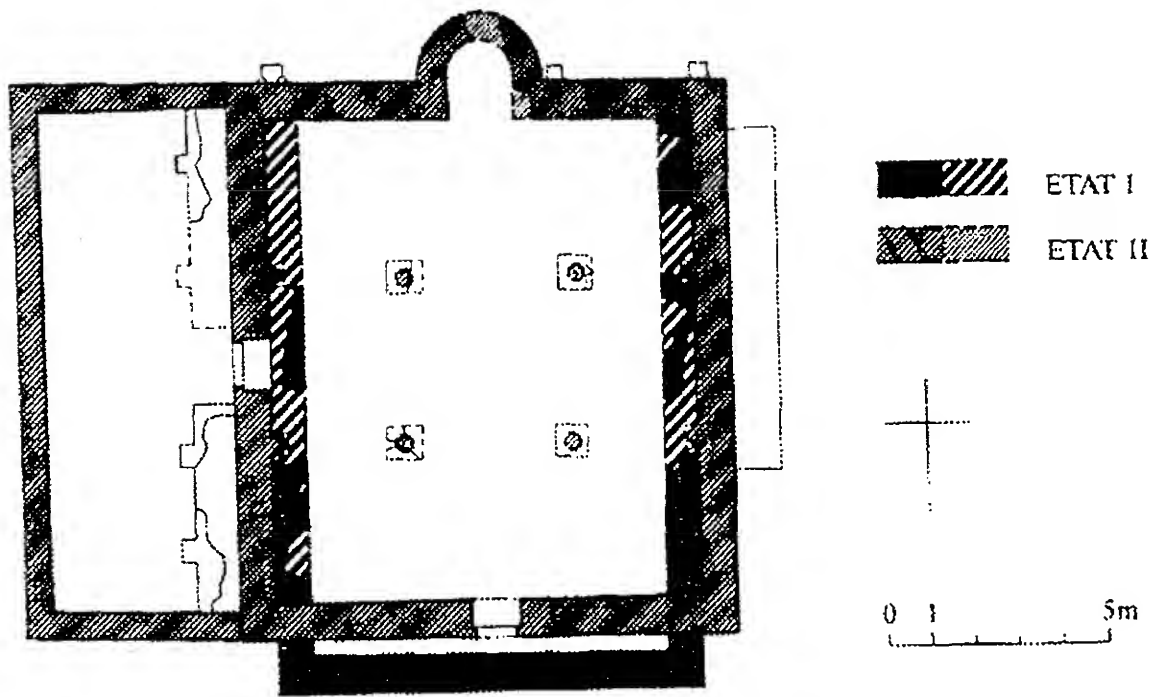


Figure 8 Umm al-Walid II (after Bujard and Trillen)

dwelling unit. As to be expected, it appeared in civilisations which used the hypostyle hall for some of their grandest architectural expressions. The temples of Ramsis II at Thebes and Ramsis III at Medinet Habu (13–12th century BCE) have various combinations of pillared halls in which rooms with four piers figure frequently.<sup>30</sup> These temples could also be seen, as least partially, as examples of domestic architecture writ large, and indeed four-columned rooms also occur frequently in Pharaonic domestic architecture, e.g. at Thebes, Kahun and Amarna.<sup>31</sup>

The Achaemenid architecture of Susa and Persepolis is most famed for its multi-pillared apadanas, but the four columned room occurs there not only in the complex of small rooms of the harem at Persepolis<sup>32</sup> but also in other important contexts: in two buildings probably connected with religious use (Fig. 9.1, 9.3)<sup>33</sup> and in the major gateways of each site.<sup>34</sup> That of Persepolis, the Gate of All Lands, possibly also served as a royal audience hall.<sup>35</sup>

The temple at Kūh-i Khvaja (Fig. 9.2) is now most often thought to be another Achaemenid example of this plan, while a near contemporary may be the temple of the Oxus at Takht-i Sangīn, most recently dated from the

<sup>30</sup> W.S. Smith and W. K. Simpson, *The Art and Architecture of Ancient Egypt*, Harmondsworth, 1981, figs. 355–6.

<sup>31</sup> E.g., in the harem of the palace of Amenhotep III at Thebes (14th century BCE), in the Middle Kingdom worker's town at Kahun and in larger houses there: Alexandre Badawy, "La maison mitoyenne de plan uniforme dans l'Égypte pharaonique," *Bulletin of the Faculty of Arts, Cairo University* 16/2, 1953, figs. 26, 8–9, respectively; and in a bureaucrat's house at Amarna (14th century BCE): Donald Preziosi, *The Semiotics of the Built Environment*, Bloomington, 1979, pl. IX.

<sup>32</sup> Edith Porada, "Classic Achaemenian Architecture and Sculpture," in *The Cambridge History of Iran, II, The Median and Achaemenian Periods*, ed. I Gershevitch, Cambridge, 1985, fig. 1/C and C'.

<sup>33</sup> Godard, *The Art of Iran*, figs. 139–40. For the most recent discussion of the so-called "Fratadara" temple at Persepolis see I. Pichikyan, "The Fire-Temple at Persepolis (Composition, Dating, Attribution)," *Information Bulletin, International Association for the Study of the Cultures of Central Asia* 16, 1989, pp. 55–73.

<sup>34</sup> Susa: Porada, "Classic Achaemenian Architecture," figs. 6–7. Persepolis: *ibid.*, fig. 1/buildings K, M'.

<sup>35</sup> This is suggested in David Stronach, "Pasargadae," in *The Cambridge History of Iran, II, The Median and Achaemenian Periods*, ed. I Gershevitch, Cambridge, 1985, p. 843.



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4-3rd century BCE (Fig. 9.4).<sup>36</sup> Another nearby Hellenistic example from northern Afghanistan is that of Dilberjin (1st century CE).<sup>37</sup>

A Parthian religious example is the cella of the 2nd century CE temple at Bard-i Naishanda, Khuzistan,<sup>38</sup> while evidence of its popularity in neighbouring territories comes from Georgia in the Dedopolis Mindori temple of the 2-1st century BCE (Fig. 9.5)<sup>39</sup> and at the Kushan site of Surkh Kotal in Afghanistan (c. 50-150 CE).<sup>40</sup> Parthian architects also employed the plan in a variety of other contexts. At Nysa (2nd century BCE) four quatrefoil columns were used to support the roof of an immense palatial hall some 20m square.<sup>41</sup> The later palaces of Nippur and Assur (Fig. 10) contained rooms which were slightly rectangular but which also had four columns dividing them into nearly equal spaces.<sup>42</sup> In the case of the latter we notice an important change: the roofing, instead of the formerly usual flat roof of wooden beams, was of barrel vaults which divided the interior space into three aisles, a conception which appears in many later Islamic examples.

Contemporary with the Parthian period are the Nabatean temples of the Hauran, four of which have identi-

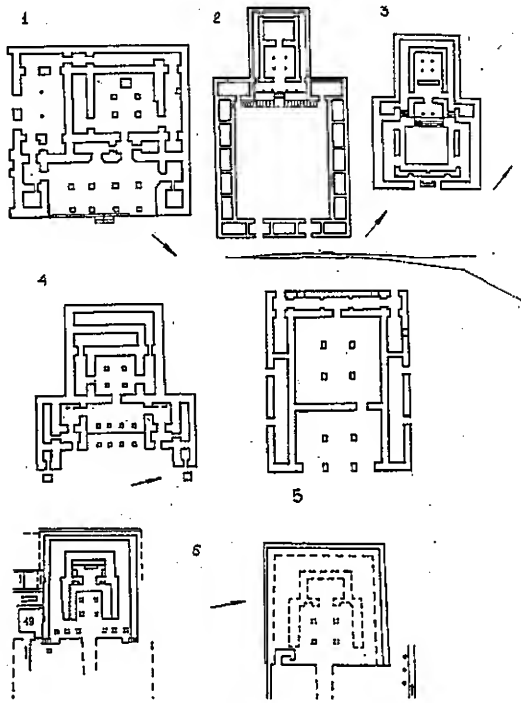


Figure 9 (not to scale), Pre-Islamic nine-bay temples (after Shkoda): 1) Persepolis, temple, 2) Kūh-i Khvaja, 3) Susa, 4) Temple of the Oxus, 5) Dedopolis Mindori, 6) Panjikent

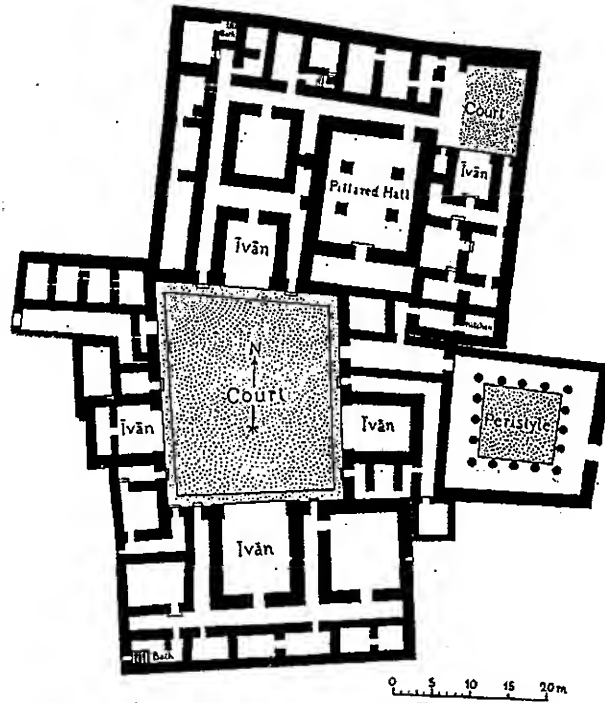


Figure 10 Assur, palace (1st century CE) (after Reuther)

<sup>36</sup> I. Pichikyan, "The Oxus Temple Composition in the Context of Architectural Comparison," *Information Bulletin, International Association for the Study of the Cultures of Central Asia* 12, 1987, pp. 42-65, fig. 1.

<sup>37</sup> Güntür Akin, *Asya merkezi mekan gelenegi*, Ankara, 1990, p. 192, fig. 3.

<sup>38</sup> Susan B. Downey, *Mesopotamian Religious Architecture: Alexander Through the Parthians*, Princeton, 1988, fig. 58.

<sup>39</sup> V. Shkoda, "Iranian Traditions in Sogdian Temple Architecture," in *The Art and Archaeology of Ancient Persia*, ed. Vesta Sarkhosh, Robert Hillenbrand and J.M. Rogers, London, 1998, p. 126, fig. 2.5.

<sup>40</sup> Klaus Schippmann, *Die iranischer Feuerheiligtümer*, Berlin, 1971, fig. 81. Schippmann's conclusions (pp. 476-515) give an overall view of many buildings discussed here.

<sup>41</sup> Georgina Herrmann, *The Iranian Revival*, Oxford, 1977, pp. 34-5; D. Schlumberger, "Parthian Art," in *The Cambridge History of Iran, III, The Seleucid, Parthian and Sasanian Periods*, ed. Ehsan Yarshater, Cambridge, 1983, fig. 5.

<sup>42</sup> O. Reuther, "Parthian Architecture. A. History," in *A Survey of Persian Art*, ed. A.U. Pope and P. Ackerman, Oxford, 1938, I, figs. 106, 108.

cal plans of the nine-bay hall surrounded, like many of the above temples, by an ambulatory (Fig. 11).<sup>43</sup> This layout, as we shall see, is reinterpreted in various ways in the Islamic period.

The typical Sasanian fire temple is smaller than Achaemenid examples and none has a four-columned interior, but the latter form survived in Sogdian religious architecture in the temples of Panjikent (5th century CE).<sup>44</sup> A recently excavated Sasanian complex (datable to 440 CE) near Darragaz, north of Mashhad near the border with Turkmenistan, has a four-columned hall that served as an antechamber to a fire temple (Fig. 11A).<sup>45</sup> Narshakhī informs us that the Friday Mosque of Bukhara was built on the site of its fire temple, as was one of Bukhara's suburban mosques, that of Mākh.<sup>46</sup> Given the tendency of the early Islamic settlers at first simply to convert existing buildings to places of worship rather than to destroy and rebuild them,<sup>47</sup> the nine-bay form may have lived on as a core element of the mosque in several important early settlements. Direct evidence for this comes from the Sasanian caravansaray at Dayr-i Gachīn south of Rayy (Fig. 12).<sup>48</sup> This has a nine-dome mosque with signs of three building periods, Sasanian, Saljuq and Safavid. The evidence suggests that a

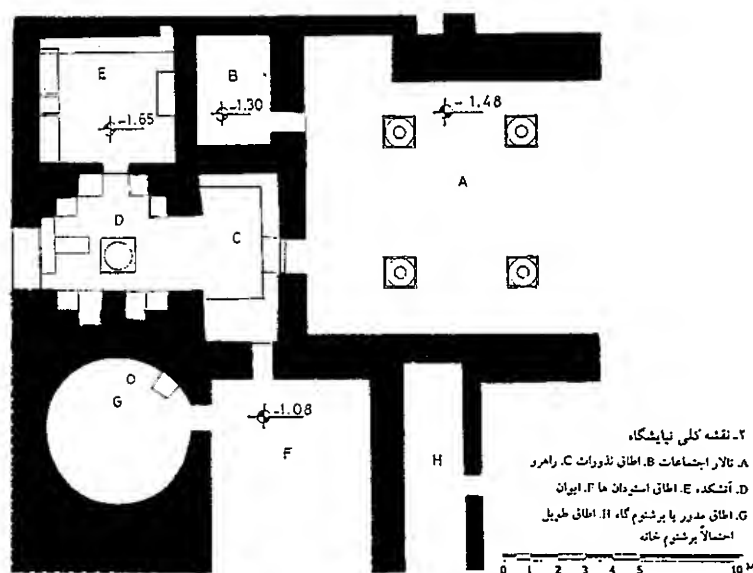
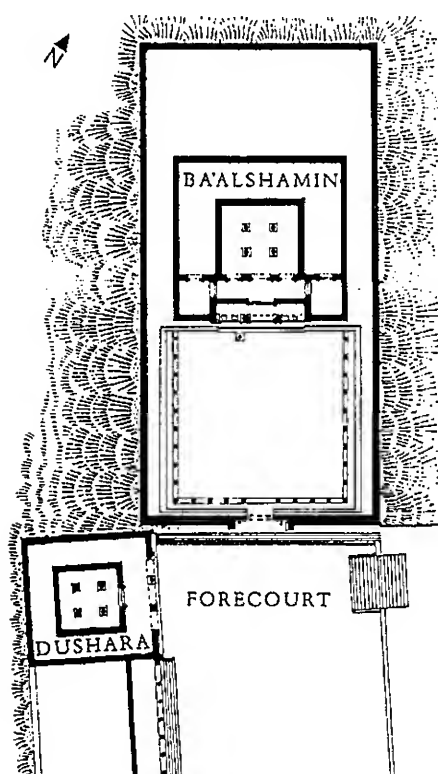


Figure 11A Bundiān, Darragaz, Sasanian complex (440 CE) (after Rahbar)

Figure 11 Seeia (Si'), Ba'alshamin and Dushara temples (late 1st century BCE) (after Ward-Perkins)

<sup>43</sup> E. g. at Sa'r, first century BCE, *ibid.*, fig. 112b, and the sanctuary of Ba'alshamin (33-32 BCE) and the adjacent Dushara Temple at Seeia (Si'), J. B. Ward-Perkins, *Roman Imperial Architecture*, Harmondsworth, 1981, fig. 220. For the temple at Sur, 1st century BCE-1st century CE, see the references in Schippmann, *Feuerheiligtümer*, 481.

<sup>44</sup> Shkoda, "Iranian Traditions," fig. 1.

<sup>45</sup> Mihdi Rahbar, "Mu'arifi-yi Ardian (ntayishgāh)-i makshūfa-yi daūra-yi sasānī dar Bundiān-i Darragaz va barrast-yi mushkilāt-i in bana," in *Davummin Kungira-yi tārikh-i mi'mārī va shahrsāzi-yi Iran*, Tehran, 1379/2000, 2, pp. 315-41.

<sup>46</sup> *The History of Bukhara*, tr. Richard N. Frye, Cambridge, Mass., 1954, pp. 21, 48-90.

<sup>47</sup> For some examples of surviving converted fire temples, see Bernard O' Kane, "Chāhārtāq, Islamic period," *Encyclopaedia Iranica* IV/6, pp. 639-42.

<sup>48</sup> Mehrdad Shokoohy, "The Sasanian Caravanserai of Dayr-i Gachin, south of Ray, Iran," *Bulletin of the School of Oriental and African Studies* 46, 1983, pp. 445-61.

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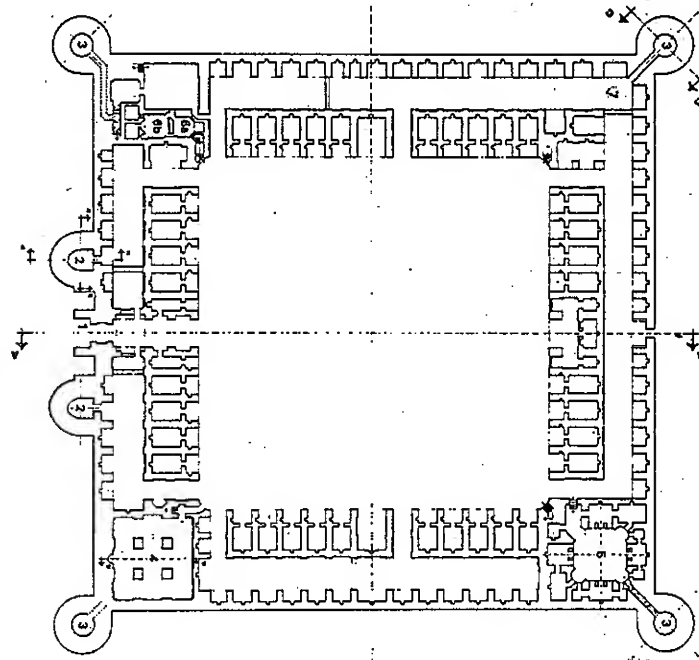


Figure 12 Dayr-i Gachin, caravansaray, Sasanian and later (after Shokoohy)

Sasanian dome with surrounding ambulatory (e.g. a fire temple) was converted into the nine-bay mosque, a telling example of this conversion in the heartland of Iran. It must have been seen by numerous travellers, but this is less important to the possibility of its dissemination than that a similar transformation occurred at many other Iranian and Central Asian sites.

A variety of nine-bay plans was also incorporated in domestic architecture of Sogdia. These range from both smaller and larger residences with four-columned reception rooms (6th-8th century) at Panjikent (Fig. 13.1), Shahrīstān and Jumalak Tepe<sup>49</sup> to the main hall of the Buddhist monastery at Ajina Tepe (7-8th century CE).<sup>50</sup> As the roots of the nine-bay plan are found in trabeate architecture, it is to be expected that later versions would treat the roofing as a template upon which to experiment. The barrel vaults of the four-columned hall of the palace at Assur above are the earliest example of this, while two Central Asian fortified buildings, one at Chil Hujra (7-8th century ?) (Fig. 13.2) near Shahrīstān,<sup>51</sup> the other at Aultepe (6-7th century) (Fig. 13.3) in the Kashkadarya,<sup>52</sup> indicate further experimentation. The large audience hall at Chil Hujra has been reconstructed as having cross-vaults with a hexagonal dome over the central bay, while at Aultepe the central unit of the upper floor of the palace had a central dome larger than the four domed corner bays, leaving four rectangular spaces.

<sup>49</sup> V. G. Veselovsky et al, *Arkhitektura Sovetskogo Tadzhikistana*, Moscow, 1987, p. 16 (small houses); V. L. Voronina, "Arkhitektura Drevnego Pendzhikenta," *Trudi Tadzhikskoi Arkheologicheskoi Ekspeditsii*, 3, 1951-3 gg., Akademiya Nauk SSSR, Materiali i Issledovaniya po Arkheologii CCCR 66, Moscow and Leningrad, 1958, fig. 3 (Panjikent); Sergej G. Chmel'nizkij, "Peshtak und Mihrab: Zur Frage der Herkunft der Portalformen in der zentralasiatischen Architektur," *Istituto Universitario Orientale, Annali* 47, 1987, fig. 2 (palace at Shahrīstān); *idem*, "Zur Klassifikation der frühmittelalterlichen Burgen in Mittelasien," *Istituto Universitario Orientale, Annali* 45, 1985, pp. 25-47, fig. IV.3 (Jumalak Tepe).

<sup>50</sup> B. A. Litvisky and T. I. Zeymal, *Adzhina-Tepa*, Moscow, 1971, pp. 18, 221.

<sup>51</sup> Chmel'nizkij, "Zur Klassifikation," pp. 45-6.

<sup>52</sup> *Ibid.*, pp. 37-8.

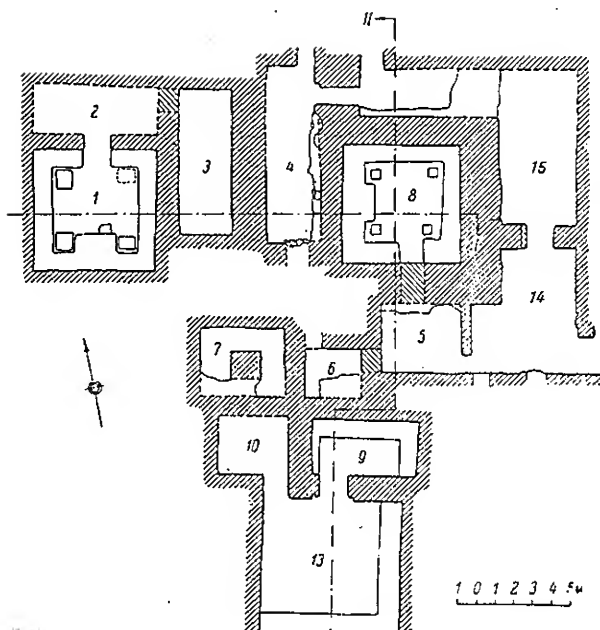


Figure 13.1 Panjikent, residence (6-7th century) (after Voronina)

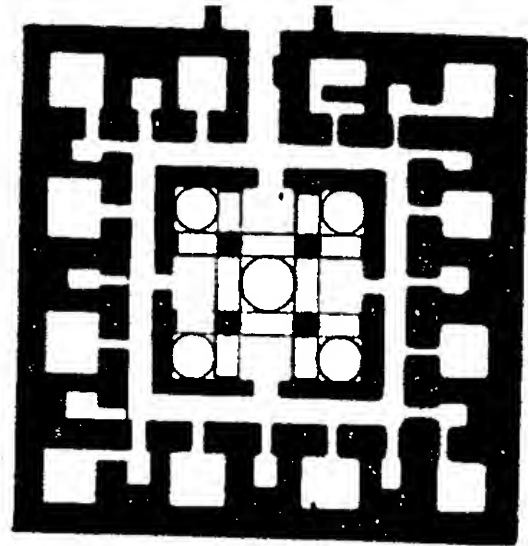


Figure 13.2 Chil Hujra, fortified residence (after Chmel'nizkij)

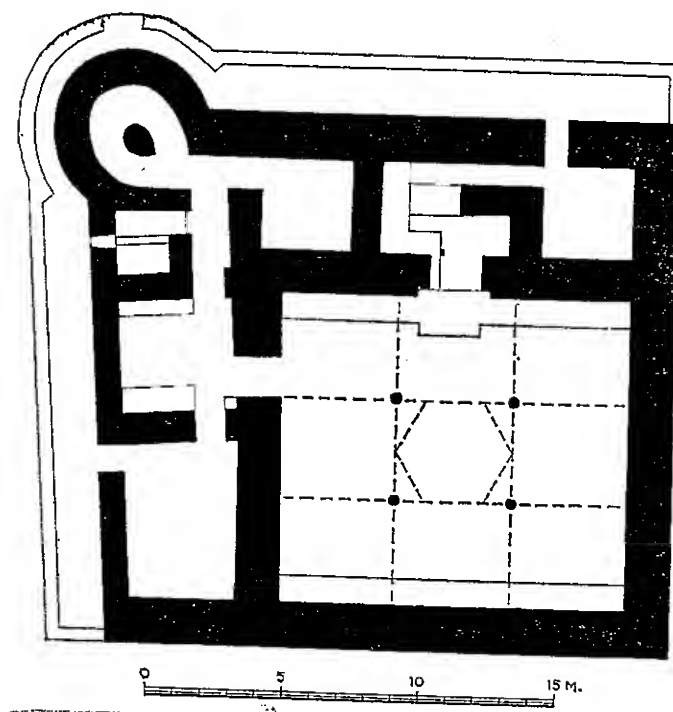


Figure 13.3 Aultepe, fortified residence (after Chmel'nizkij)

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

### The Quincunx

This important development, the vaulting (by domes, barrel or cross-vaults) of the central and outer four bays, became routine in Christian architecture from the ninth century on, frequently accompanied by an emphasis on the domed central bay of the nine-bay plan. This emphasis can take the form of an enlargement of the central bay, producing the so-called quincunx or cross in square plan, one of the most popular in middle Byzantine architecture. The origins of the quincunx are still debated: it could have been produced by surrounding a dome with a slightly larger enclosure, or by increasing the size of the central bay of a nine-bay plan. An early version of the plan is in a Nabatean building, the so-called Praetorium at Mismiya (160-9 CE), which had a large cloister vault in the central bay, supported on slender columns which provided minimum interruption of the interior space, suggesting a derivation from an apadana type of building (Fig. 14).<sup>53</sup> A dome in a central bay of the same diameter as the surrounding eight is to be seen in the fifth century cathedral of Echmiadzin, although in elevation, with a tall drum, it clearly dominates the composition.<sup>54</sup> More typical of later Byzantine plans is the church of St. Gaiane at Echmiadzin (630) (Fig. 15) which has an enlarged central bay and an apse with two flanking rooms, thus forming an overall rectangular plan. A western narthex, a feature found in many medieval examples, was added to this church in the seventeenth century.<sup>55</sup> In the west the Romanesque Oratory

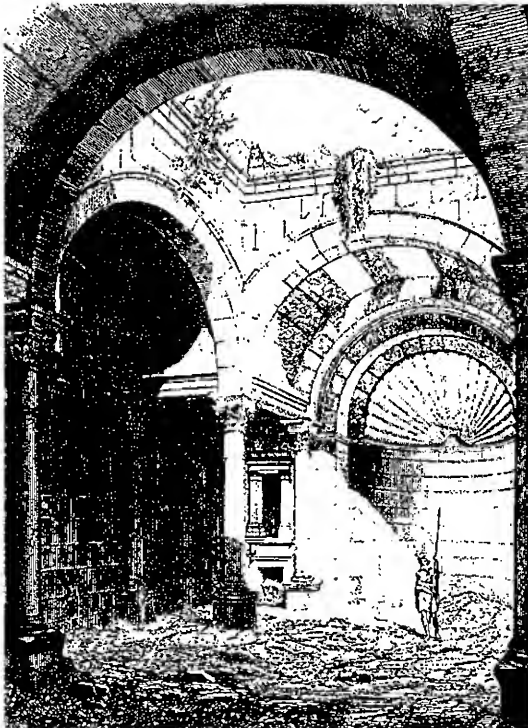


Figure 14 Praetorium at Mismiya (160-9 AD) (after De Vogüé)

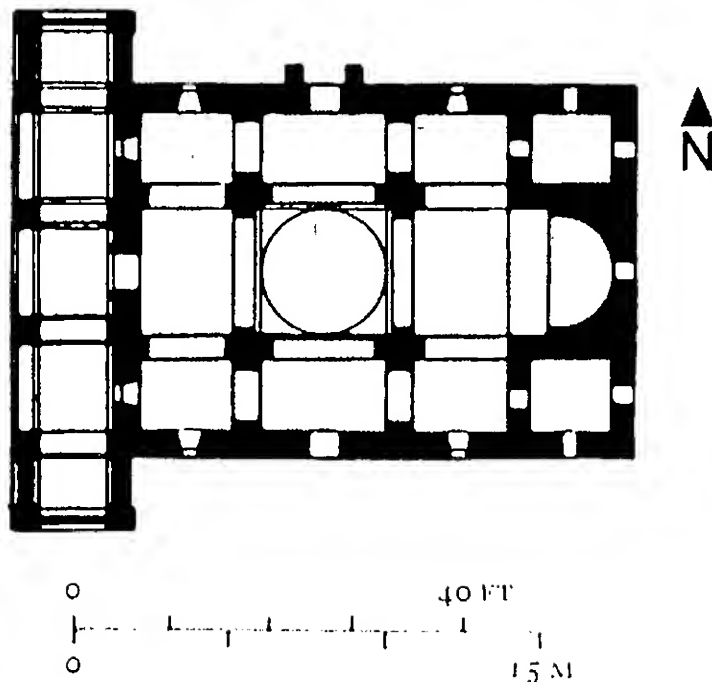


Figure 15 Echmiadzin, St. Gayane church (630) (after Krautheimer)

<sup>53</sup> Ward-Perkins, *Roman Imperial Architecture*, fig. 221. The building is now thought to have been a Roman temple originally: Klaus S. Freyberger, "das Tychaion von as-Sanamaïn. Ein Vorbericht," *Damaszener Mitteilungen* 4, 1989, 89n. 15.

<sup>54</sup> It has been established that the transformation to its present cross-shaped plan was in 483 and not 628, the latter date marking the substitution of a stone for a wooden dome: O. Kh. Khalpakhchian, *Architectural Ensembles of Armenia 8c.B.C.-19A.D.*, Moscow, 1980, pp. 102-3, fig. 2.

<sup>55</sup> Numerous examples are given in Richard Krautheimer, *Early Christian and Byzantine Architecture*, Harmondsworth, 1975, chs. 16-7; for a discussion of the origin and development of the quincunx plan see *ibid.*, pp.359-62. For two later examples of the regular nine-bay plan in Armenian architecture, at the monasteries of Ahpat (13th cen-

of St. Germigny-des-Près (806) has a central dome only slightly larger than the other bays, but with an elevation similar to the quincunx examples.<sup>56</sup>

Another approximation of the quincunx plan can be arrived at in a different fashion: by decreasing the size of a dome surrounded by an ambulatory. This is the form of the Sasanian *chāhārṭāq*, and when the four piers are reduced in size and the corners of the ambulatory domed, as in the late Sasanian or early Islamic near Fasā in Fars<sup>57</sup> a connection between the two plans seems clear. However, this may be, as in our opening quotation, a case where the resemblances are more on paper than in fact: the concept of two distinct spaces, central dome and surrounding ambulatory, would have made it difficult to make the mental leap of designing it to be one room.

In addition to the Praetorium at Mismiya mentioned above, we find another two early variations of the quincunx in Syria. The first, the so-called audience hall of al-Mundhir at Rusafa (569-82) is now thought more likely to have been a church dating from c. 575; here, unlike Mismiya, heavy L-shaped piers are used for the supports of the central bay, suggesting that the dome was the starting point for the plan.<sup>58</sup> The other is the first Islamic example of this type, the bath at Khirbat al-Mafjar (before 743), where it is surrounded by an ambulatory with apsidal recesses.<sup>59</sup>

### Early Islamic Nine-Bay Plans

However, it is arguable that the first intimations of an Islamic interest in the nine-bay plan may have come, as Allen has remarked, with the heavier foundations for the bays in front of the mihrab of the Great Mosque at Wasit (c. 86/705).<sup>60</sup> Although the exact number of bays with heavier foundations was unfortunately not confirmed by the limited excavation soundings, it suggests that nine (or more) ante-mihrab bays had a special architectural emphasis, which may well have been related to the *maqṣūra* which the mosque was known to have.<sup>61</sup>

Other Umayyad appearances of nine-bay plans appear to have different antecedents. Four of these are the bath at Anjar<sup>62</sup> and the three neighbourhood mosques mentioned earlier (Qūṣayr al-Hallabat, Khān al-Zabīb and Umm al-Walid) (Figs. 7-9).<sup>63</sup> In each case, in addition to the four piers in the centre of the square space, there are engaged piers or columns on the side walls linking the arcades to form a division into three aisles recalling basilical plans.<sup>64</sup> The origin of the nine-bay plan at Anjar is underlined by the similar bath at Qaṣr al-Ḥayr East, where the corresponding main undressing area is indeed a basilica.<sup>65</sup> The fifth Umayyad example, the great hall of the Dār al-ʿImāra at Kufa (c. 665) is likewise basilical in plan, but may also reflect different antecedents.<sup>66</sup> The hall looks on to a courtyard, and is divided into a central nave and two aisles by six columns, two of which are on the edge of the courtyard, while there are two further engaged columns at the rear. The use of columns in this way underlines its similarities with Sasanian audience halls,<sup>67</sup> but it differs from them in the spacing of

tury) and Varak Vank (17th century) see Akin, *Asya merkezi mekan*, pp. 201-2, figs. 19-20.

<sup>56</sup> K. J. Conant, *Carolingian and Romanesque Architecture 800 to 1200*, Harmondsworth, 1978, figs. 11-12; Matthias Untermann, *Der Zentralbau in Mittelalter*, Darmstadt, 1989, pp. 122-3. Untermann cites St. Germigny-des-Près in connection with the nine-bay core of the Frauenkirche at Nürnberg (1349): *ibid.*, fig. 60.

<sup>57</sup> Dietrich Huff, "Chāhārṭāq I. In Pre-Islamic Iran," *Encyclopaedia Iranica*, 4:637, Fig. 36.

<sup>58</sup> Gunnar Brands, "Der sogenannte Audienzsaal des al-Mundir in Resafa," *Damascener Mitteilungen* 10, 1998, pp. 211-35.

<sup>59</sup> Its relationship with other nine-bay plans has been discussed in Ettinghausen, *From Byzantium to Sasanian Iran*, 49-58 and King, "Nine Domed Mosque," pp. 385-6.

<sup>60</sup> See n. 4 above.

<sup>61</sup> Creswell, *loc. cit.* Assuming symmetry, the number of bays with special emphasis could have been from nine to twenty-five.

<sup>62</sup> Creswell, *EMA*, I/2, p. 481, fig. 542.

<sup>63</sup> Creswell, *EMA*, I/2, p. 505, figs. 560-1.

<sup>64</sup> Cf. the basilica of Theodosius I (379-95) at Ba'albak: Creswell, *EMA*, I/1, p. 193, fig. 97.

<sup>65</sup> Creswell and Allan, *Short Account*, p. 161, fig. 92.

<sup>66</sup> The plan in Creswell and Allan, *Short Account*, 12, is more useful than that of the reprint of *EMA*, I/1, as it is contained on one page, and thus permits the proportions to be seen more faithfully.

<sup>67</sup> E. g. those of Damghan and Kish, reproduced in see J. Suaveget, *La mosquée omeyyade de Médine: étude sur les origines architecturales de la mosquée et de la basilique*,

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

the columns to produce a nave only slightly wider than the flanking aisles, suggesting the influence of more conventional basilicas.

Even with regard to this small number of Umayyad nine-bay plans it is clear that a variety of sources seems to have been adapted by their designers: the quincunx in the case of Khirbat al-Mafjar, the hypostyle at Wasit, and the basilica for the others, partially modified by Sasanian practice at Kufa.

We have seen above that the earliest 'Abbasid period witnesses the proliferation of the nine-bay plan in the mosques of the Darb Zubayda. It will be recalled that the nine-bay mosques are mostly found near the main entry of the *qasrs* which were located at regular intervals along the route. It has been argued by Terry Allen that these *qasrs* were built for the accommodation of the court, and that the nine-bay plan employed in them, as at the Wasit Friday mosque, represents the minimum architectural form required for official ceremonial (i.e. formally led prayer and religious oration).<sup>68</sup>

However, the extent to which the mosques attached to the *qasrs* should be considered a setting for "official" ceremonial is a matter for debate. Whether the *qasrs* should be seen as the lodges for members of the court, or rather as caravansarays for a larger public remains open.<sup>69</sup> Even if the *qasrs* were built by Zubayda for members of court, visits by them would surely not have been all that frequent. The economic benefits of renting the space within them to commercial traffic over the route must have been obvious, and one feature strongly suggests that the mosques were built after a change in status with a more numerous clientele in mind: they are almost all additions to the original plan (Barud is an exception). The apparent lack of decoration in the mosques (and *qasrs*) is also a reason to disassociate them with royal clientele. Another problem with linking these mosques with the hypothetical nine-bay ante-mihrab space in Wasit is their vaulting. Although this has not been preserved, enough information remains from the disposition of the piers to show that basilical plans are the models for the Darb Zubayda group: the rectangular piers and engaged piers indicate that the vaulting was always in two parallel rows, forming three aisles, and the ground plans are usually rectangular rather than square, with the arcades parallel to the long side.

Even though it might weaken the argument that the mosques were not built exclusively for official ceremonial, it is still worth noting the resemblance which many of the Darb Zubayda mosques have to the audience hall of the Dār al-'Imāra at Kufa, one of the towns on the Darb Zubayda itself.<sup>70</sup> Kurā' and al-'Aqīq both have triple entrances, a wider central aisle, and engaged piers at the rear. But instead of necessitating a ceremonial link between these structures, it rather serves to underline the blurring of the meanings of forms which naturally arose from the reuse by Islam of earlier prototypes.<sup>71</sup>

As mentioned above, it was in connection with the publication of one of the most recently discovered of Abbasid nine-bay mosques, the Hājī Piyāda of Balkh, that recent discussions of the origins of the nine-bay plan have taken place.<sup>72</sup> The comparative material available at the time can now be considerably expanded. I have divided the material chronologically into two periods, the first up to 1200, by which time the major developments of the nine-bay form are apparent and a summary of its spread can be attempted. I have divided each chronological division further into broad geographical categories.

Paris, 1947, pp. 163-4, figs. 27-8.

<sup>68</sup> Allen, *Five Essays*, pp. 81-2.

<sup>69</sup> On this point see MacKenzie and al-Helwah, "Darb Zubayda Architectural Documentation Program," 50. The excavators of the *qasr* at al-Rabadha regard the area simply as the main residential part of the town.

<sup>70</sup> See n. 66 above.

<sup>71</sup> The basilica itself had earlier undergone a change from a large meeting hall under the Romans to a Christian church plan; for a study of its further influence on Islamic mosques and palaces, see J. Sauvaget, *La mosquée omeyyade de Médine: étude sur les origines architecturales de la mosquée et de la basilique*, Paris, 1947.

<sup>72</sup> See n. 3 above.

**Table 1: Nine-Bay structures in the Islamic World, c. 800-1200.**

**The Maghrib:**

*Susa, Bū Fatātā mosque, 838-41.*

The prayer hall is reached from a narthex by a single doorway opposite the qibla; another door leads in from the east. The interior is divided into cross arcades by cruciform piers and roofed by barrel vaults parallel to the qibla.<sup>73</sup> Cross arcades on cruciform piers are also used in two nearly contemporary earlier monuments: the cistern at Ramla (789) and, closer to hand, the mosque within the Ribat of Sousse.

*Qayrawan, Muhammad ibn Khayrūn mosque, 252/866 (Fig. 16).*<sup>74</sup>

Although Creswell and Marçais thought the interior was modern or dated from the time of the addition of the minaret (844/1440-1), Kircher has shown that the four columns with their Kufic inscriptions and the smaller columns flanking the mihrab are likely to be original. As at Khān al-Zabīb and Umm al-Walid II, the four columns are aligned with engaged piers on the sides forming two arcades parallel with the qibla wall. The present roofing of groin vaults replaced an earlier wooden roof. There are three entrances on the side opposite the qibla.

*Cordoba, Great Mosque, cistern under courtyard, al-Manṣūr, 987-8 (Fig. 17).*<sup>75</sup>

This combined some of the features of the two previous monuments, being divided into cross arcades by cruciform piers with each bay covered with a cross-vault. Apart from the cruciform piers the scheme is identical to the cistern of the early Christian Basilica Majorum at Carthage (Fig. 18).

*Toledo, Bāb al-Mardum mosque, 999/1000.*<sup>76</sup>

Four central columns, cross arcades. Each bay is domed with intersecting arches, the central one being higher than the others. Three of the sides had three entrances, while the qibla side may have two entrances flanking the mihrab.

*Toledo, Las Tornerías, 11-12th century.*<sup>77</sup>

Both the date and the function of this building have been the subject of much controversy. Since it is clearly a simplified version of the Bāb al-Mardum in plan and elevation, it has been assumed that it was also a mosque. However, its upper story location and wildly inaccurate qibla orientation (a little west of south) would make the suggestions of a palace at least as likely.

**Central Islamic Lands, Arabian Peninsula**

*Cairo, Dayr Anba Shinuda, refectory, post-Islamic conquest (Fig. 19).*<sup>78</sup>

<sup>73</sup> Creswell, *EMA*, II, pp. 246-8; King, "Nine Bay," pp. 332-3.

<sup>74</sup> Gisela Kircher, "Die Moschee des Muhammad b. Hairun ('Drei-Tore-Moschee') in Qairawan/Tunisien," *Mitteilungen des Deutschen Archäologische Instituts, Abteilung Kairo* 26, 1970, pp. 141-67. Pl. Lva-b shows clearly the groin vaulting of the bays. Discussion of this monument is surprisingly omitted by King, presumably on the ground that it is not domed, although its groin vaulted bays are closer to his domed examples than the barrel-vaulted Bū Fatātā which he does discuss.

<sup>75</sup> Basilio Pavón Maldonado, *Tratado de Arquitectura Hispanomusulmana, I: El Agua*, Madrid, 1990, pp. 20-2. fig. 10, p. 22, illustrates both the Cordoba and Carthage cisterns.

<sup>76</sup> Ewert, "Die Moschee am Bab al-Mardum," 287-351; King, "Nine Bay," pp. 339-42.

<sup>77</sup> M. Gomez-Moreno, *El arte árabe hasta los Almohades: arte mozárabe, Ars Hispaniae*, 3, Madrid, 1951, pp. 210-12; King, "Nine Bay," 342-5; Clara Delgado Valero, *Toledo islámico: ciudad, arte e historia*, Toledo, 1987, pp. 303-17.

<sup>78</sup> Mahmoud Ali Mohamed and Peter Grossman, "On the Recently Excavated Monastic Buildings in Dayr Anba Shinuda: Archaeological Report," *Bulletin de la Société*



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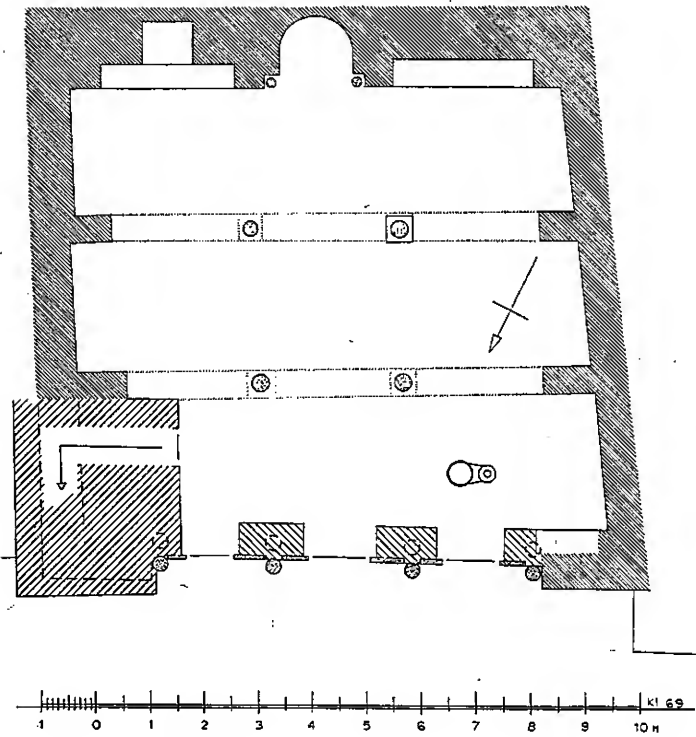


Figure 16 Oairawan Muḥammad ibn Khayrūn mosque. 252/866 (after Kircher)

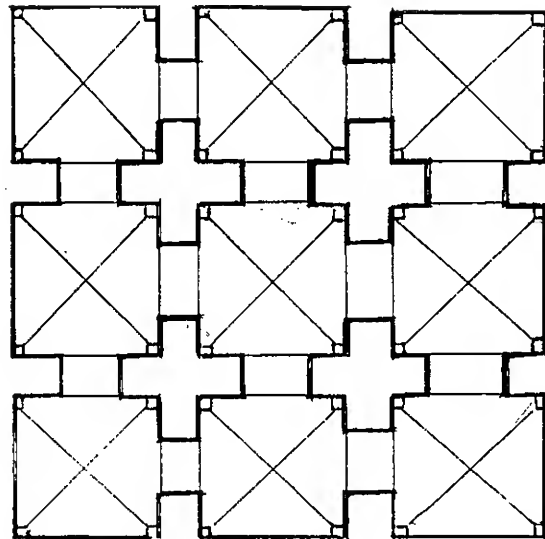


Figure 17 Cordoba, Great Mosque, cistern under courtyard, al-Manṣūr, 987-8 (after Maldonado)

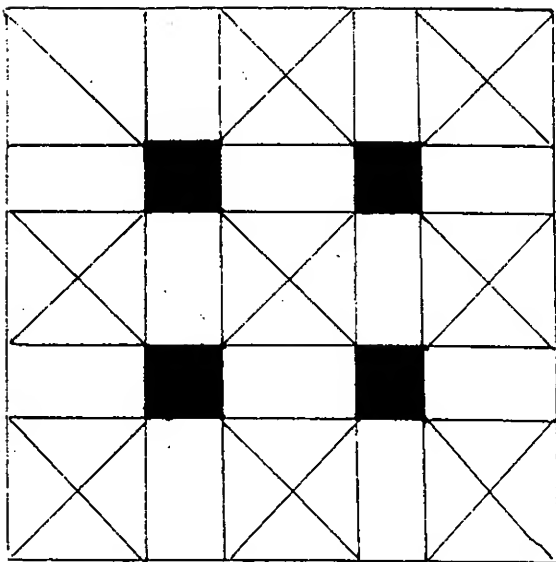


Figure 18 Carthage, Basilica Majorum, cistern (after Maldonado)

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The excavators of this site note that the four central pillars are a later insertion in the room. Buttresses on the side walls suggest the presence of two arcades. According to a personal communication to the authors from G. Castel, the unpublished monastery of Dayr al-Fakhūrī has a similar refectory. A similar building of indeterminate date at Dayr Anba Bishoi, Wādī Natrūn, was a kitchen.<sup>79</sup>

*Khirbat al-Mafjar, bath hall, c. 730-43.*<sup>80</sup>

Ettinghausen has recognised that bath hall can be interpreted as a nine-bay plan surrounded by an ambulatory on each side, and is also related to the quincunx plan with its taller and wider bay upon which the dome was placed.

*Sudan, Old Dongola, audience hall (?), c. 850.*<sup>81</sup>

This building was transformed into a mosque in 717/1317. The square structure with four columns and cross beams is set within the walls on the upper story of the building. Although it now has a flat roof, its original roofing is uncertain, both at the time of its foundation and at the time of its use as a mosque.

*Al-Raya, Sinai Peninsula, mosque, 9th century.*<sup>82</sup>

The mosque's four-pillared plan is evident from a published photograph, and its date and form has been confirmed in a personal communication by one of the excavators of the site, Yoko Shindo.

*Cairo, Sharīf Ṭabāṭabā mashhad, 10th century.*<sup>83</sup>

When Creswell surveyed the building the walls stood only to a level of c. 1m. His restoration of cross arcades are certainly suggested by the central cruciform piers, although the domes above this suggested by Creswell could equally be replaced by tunnel vaults or groin vaults, as at the Bū Fatātā and Muhammad ibn Khayrūn mosques. The entrances are at least certain: three on each side with the exception of the qibla which has a mihrab in the central bay, i.e. identical to the Bāb al-Mardum mosque.

Geoffrey King's argument that the building was a funerary mosque rather than a tomb is plausible; his redating of it to the Fatimid period on the grounds that the other Egyptian examples of the type (the Sab'a wa Sab'in Wali and Jāmi' al-Fīyālah) are 11th century is unconvincing.<sup>84</sup> Given the existence of earlier examples from Ifriqiya to Central Asia, there is no reason why the plan should not have been employed in Egypt in the 10th century.

*Aswan, Sab'a wa Sab'in Walī mausoleum, 11th century (?).*<sup>85</sup>

This now destroyed building is known only from its plan. It indicates that it had cross arcades surmounted

*d'Archéologie Copte* 30, 1991, pp. 53-63.

<sup>79</sup> Hugh G. Evelyn-White, *The Monasteries of the Wādī 'n Natrūn. Part III. The Architecture and Archaeology*, ed. Walter Hauser, New York, 1933, p. 165, pl. XXXVII.

<sup>80</sup> From Byzantium, pp. 50-3.

<sup>81</sup> Włodzimierz Godlewski, "The Mosque Building in Old Dongola," *New Discoveries in Nubia: Proceedings of the Colloquium on Nubian Studies*. The Hague 1979, ed. Paul van Moorsel (Leyden, 1982), 21-8; King, "Nine Bay," 358-60. Another Nubian church design may also be relevant. At Abu Sir (750-850) and Tamit (800-1250) the central core of the church is again a square, supported at Abu Sir by four columns and at Tamit by four L-shaped piers: Przemysław M. Gąrtkiewicz, "An Introduction to the History of Nubian Church Architecture," *Nubia Christiana* 1, 1982, fig. 2. Gąrtkiewicz sees this plan as deriving from a basilical one, e.g. Buhen, 650-800 (*ibid.*, *loc. cit.*), or Kageras (*ibid.*, fig. 19/3) which have rectangular sanctuaries with four rectangular piers, similar to many of the examples on the Darb Zubayda.

<sup>82</sup> *Chūkinto Bunka Senta no kaigai hakkutsu chosa* (Excavations Abroad Conducted by the Middle East Cultural Center) (in Japanese), Tokyo, 1999, fig. 35.

<sup>83</sup> Creswell, *MAE* 1, pp. 11-15.

<sup>84</sup> King, "Nine Bay," pp. 345-51.

<sup>85</sup> Creswell, *MAE* 1, 144-5; Ugo Monneret de Villard, *La Nubia Medioevale, Mission Archéologique de Nubie, 1929-1934*, Cairo, 1957, pp. 56-7; King, "Nine Bay," pp. 351-3.

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by nine domes. There was one entrance opposite the qibla, another in the middle of the east side. It is not known whether the adjacent minaret was contemporary, but it showed that the building functioned as a mosque.

*Al-Qusiyya, Dayr al-Muḥarraqa, 11th century (?)*.<sup>86</sup>

The Church of the Virgin seems originally to have had a nine-bay plan with cross arcades, although some of the domes are now elliptical.

*Tamit, Nubia, Saint Raphael (or Sheikh) church, 10-14th century (Fig. 20.1)*.<sup>87</sup>

The *naos* of the church is supported by four cross-shaped piers. Six domes cover the western part, the three bays on the east being barrel-vaulted.

*Mediq, near Gerf Ḥusayn, Nubia, church, 10-14th century (Fig. 20.2)*.<sup>88</sup>

The *naos* of the church is supported by four cross-shaped piers. The domed central bay is slightly larger, the others being roofed with elliptical vaults.

*Kaw, Nubia, church, 10-14th century (Fig. 20.3)*.<sup>89</sup>

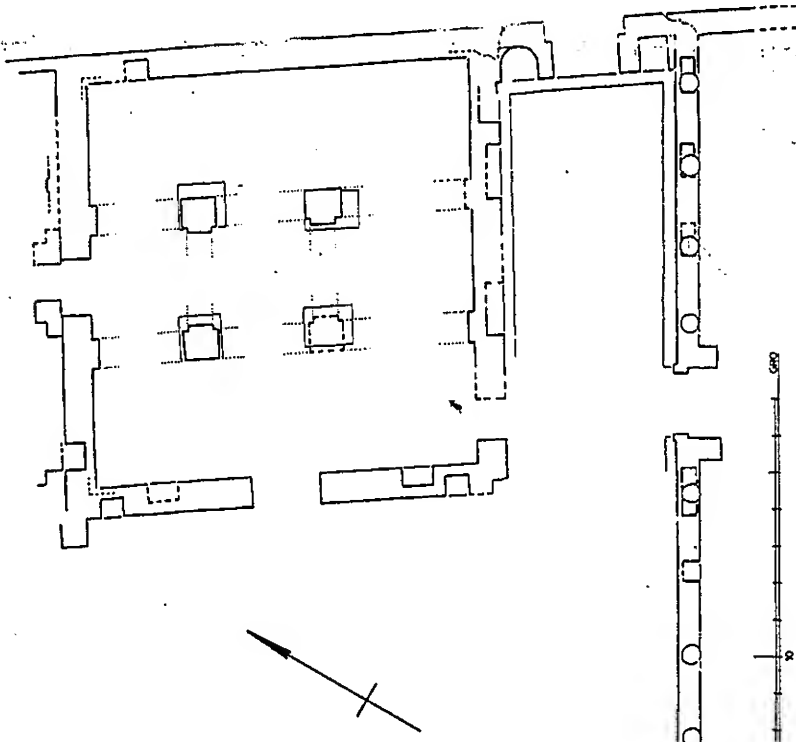


Figure 19 Dayr Anba Shinuda, refectory, post 642 (after Mohamed and Grossman)

<sup>86</sup> Monneret de Villard, *La Nubia Medioevale*, 29, fig. 22; King, "Nine Bay," pp. 356-8.

<sup>87</sup> Gartkiewicz, "Introduction," fig. 24.1.

<sup>88</sup> Gartkiewicz, "Introduction," fig. 24.2.

<sup>89</sup> Gartkiewicz, "Introduction," fig. 24.3.

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Four square piers support the nine-domed *naos*.

Cairo, *Jāmi' al-Fiṣṣalah*, 498/1104.<sup>90</sup>

Although all discussions of this monument have assumed that the mosque contained nine domes and nothing else, Maqrizi states that there were nine specially decorated domes at its highest point on its qibla side, (*fī qiblatihi tisa' qubāb fī a'lāhū*). While this could mean either that the main (or only) prayer hall had only nine domes, it is more likely, especially with the qualifier "at its highest point," to mean that only these nine bays had this special form; the parts of the mosque with a lower roof had some other form. This would suggest a *maqṣūra* with distinctive vaulting, perhaps analogous to that postulated by Terry Allen for Wasit. This is made more likely by the fact that it is described as a congregational mosque (*jāmi'*) and was one in which Friday prayers were certainly held, as Maqrizi specifically mentions its first khutba. The other congregational mosques of Cairo have courtyards that could accommodate much larger numbers than any nine-bay mosque.

*Qaydān*, near Mahawit, Banī al-Ṭayyār mosque, 12th century (?).<sup>91</sup>

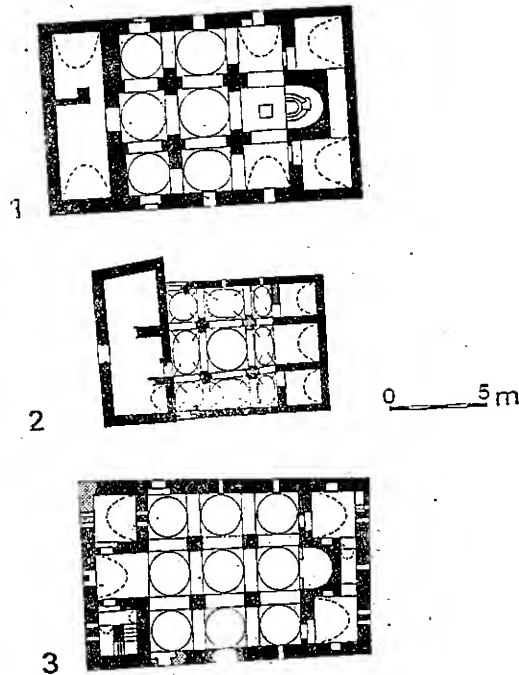


Figure 20.1. Tamit, Nubia, Saint Raphael (or Sheikh) church, 10-14th century (after Gartkiewicz), 20.2 Mediq, near Gerf Ḥusayn, Nubia, church, 10-14th century (after Gartkiewicz), 20.3 Kaw, Nubia, church, 10-14th century (after Gartkiewicz)

<sup>90</sup> Al-Maqrizi, *Al-mawā'iz wa'l-i'tibār bi-dihikr al-khiṭāt wa'l-āthār*, Bulāq, 1270/1853, 2, pp. 289-90. The building is also discussed in Golombek, "Abbasid Mosque," 188; O. Grabar, "The Earliest Islamic Commemorative Structures," *Ars Orientalis* 6, 1966, p. 10; King, "Nine Bay," 353-6. Pace King, "Nine Bay," 353n. 41, Golombek is certainly right in stating that its name was derived from its piers, *pilpayā* being the Persian for elephant foot, i.e. a large pier. While it is true, as King states, that "the text does not seem to support this interpretation," Maqrizi's explanation that the nine domes resembled elephants with warriors on top is as likely as his explanation that the design

for his minaret of Ibn Tulun's mosque came from the ruler's twisting a piece of paper around his finger.

<sup>91</sup> U. Scerrato, G. Ventrone, P. Cuneo, "Report on the 3rd Campaign for Typological Survey of the Islamic Religious Architecture of North Yemen," *East and West* 36/4, 1986, Fig. 59. Barbara Finster, "Islamic Religious Architecture in Yemen," *Muqarnas* 9, 1992, p. 126, ascribes the mosque to the 13-14th century.

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This is a flat-roofed mosque with two entrances in which the four piers support large beams perpendicular to the qibla. However, the highly decorated coffers, which are the main dating criteria, do not follow the nine-bay scheme, instead dividing the central bay into four parts and the side aisle into five parts.

*Sarmīn (near Aleppo), Friday mosque, pre-14th century.*<sup>92</sup>

Ibn Battuta reported that the inhabitants of this town reviled The Ten Companions and even the number ten, saying "nine plus one" instead and that their Friday mosque accordingly had nine domes instead of ten. While this makes a good story, the much more common occurrence of nine- than ten-domed mosques in the Islamic world suggests that it was one that fitted into this series.

*Ḥarrān, small mosque, 12th century (?)*<sup>93</sup>

Cross arcades supported on small columns, groin vaults, barrel-vaulted narthex. When Preusser recorded the mosque in 1907 (it has since disappeared) the roofing had fallen, although his plan shows it as being cross-vaulted. King argues, noting the almost completely fallen roof in Preusser's photograph, that the bays were domed rather than cross-vaulted originally, but Preusser is specific in his text about the shallow cross-vaulting, perhaps using evidence from a part of the building not visible in the photograph.

*Mosul, Jāmi' al-Nabī Jirjis (12th-13th century)*<sup>94</sup>

Cross arcades supported on octagonal piers, cross vaults. The building serves as a mosque and is adjacent to the probably older tomb of al-Nabī Jirjis; there were no entrances on the qibla side, but there may have been multiple entrances on the other three sides.

King argues that the poorly finished cross vaulting may have replaced earlier domes. Even if it is reconstructed, however, as he suggests, it may equally have replaced earlier cross-vaulted examples, like the mosque at Ḥarrān.<sup>95</sup>

### East Africa

*Kenya, Shanga, Friday mosque, c. 1000 A.D (Fig. 21)*<sup>96</sup>

In its final phase the main rectangular prayer hall had four wooden columns supporting a thatched roof.

### The Mashriq

*Bust, pavilion of Abu'l-Ḥasan Ṭāhīr (r. 288-96/901-8).*<sup>97</sup>

The anonymous author of the *Tārīkh-i Sistān* relates that the Saffarid Abu'l-Ḥasan Ṭāhīr ordered a nine-domed building surrounded by gardens and open spaces to be erected, all at great expense. A few lines later in the text it mentions that he erected another *kūshk* (pavilion or palace) at Bust, confirming the function of the first building.

<sup>92</sup> *The Travels of Ibn Battuta A.D. 1325-1354*, tr. H. A. R. Gibb, 3 vols., Cambridge, 1958-71, I, p. 94; the reference is first noted in Allen, "Early Nine-Bay Mosques," n.6.

<sup>93</sup> C. Preusser, *Nordmesopotamische Baudenkmäler altchristlicher und islamischen Zeit*, Leipzig, p. 62, pl. 77; King, "Nine Bay," pp. 364-5.

<sup>94</sup> Herzfeld and Sarre, *Archäologische Reise*, pp. 236-8. King, "Nine Bay," pp. 360-4.

<sup>95</sup> Or like the cross-vaulted six-bay mosque at Monastir (see below).

<sup>96</sup> M. Horton, "Primitive Islam and Architecture in East Africa," *Muqarnas* 8, 1991, p. 108, fig. 5.

<sup>97</sup> *Tārīkh-i-Sistān*, ed. Malik al-Shu'arā Bahār (Tehran, 1314/1935), 280. The passage has been translated as "nine new dome[d buildings]" (Milton Gold, *Tārīkh-i-Sistān* [Rome, 1976], 223), but Bahār's emendation (*loc. cit.*, n. 3) of *naū* to *tū*, as in *tū dar tū*, -fold, i.e. nine-fold, makes more sense. Writing in the 15th century Aḥmad b. Ḥusayn b. 'Alī Kātib, *Tārīkh-i Jadīd-i Yazd*, ed. Iraj Afshar (Tehran, 1345/1966), 130, records a village near Yazd by the name of Nūḥ Gunbad. Which building gave rise to this name is not specified, but it could argue for a well-known type.

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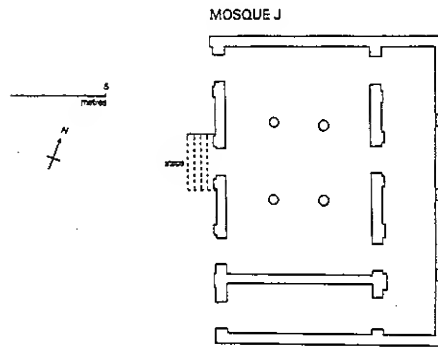


Figure 21 Kenya, Shanga, Friday mosque, c. 1000A.D (after Horton)

*Balkh, Hājī Piyāda mosque, 9th century.*<sup>98</sup>

Cross arcades on circular piers, three entrances on each side other than the qibla. Although no domes nor squinches have survived, they are certainly likely to have been present originally

*Tirmiz, Chāhār Sutūn mosque, 9-10th century.*<sup>99</sup>

Circular piers, three entrances on the west and north sides, one on the east. It probably, like the Balkh Hājī Piyāda, had domes on cross arcades.

The minaret of Tirmiz dated to 423/1032, mentioned as a terminus ante quem by King, was not connected with the Chār Sutūn, the latter being situated closer to the Shrine of Ḥakīm-i Tirmizī, west of the old town. The remains had unfortunately become indistinguishable with the surrounding ground at the time of my visit in 1997.

*Bukhara, Maghghāk-i 'Aṭṭārī mosque, 10th century (?)*<sup>100</sup>

In its first phase the rectangular building had four pillars in the interior, rather than the present six.

*Khazara, Dīgarān mosque, 10-11th centuries.*<sup>101</sup>

Cross arcades, brick piers, larger and higher central dome, smaller domes in the four corners, squinch vaults in three of the other four bays and a groin vault remaining one. Three entrances on the side opposite the qibla (northeast), one on the southeast.

*Siraf, mosque at Site P1, 9-12th centuries.*<sup>102</sup>

Rectangular with the qibla on the narrow side; two arcades parallel to the qibla, flat roof.

*Kirman, Malik mosque, 11-12th centuries.*<sup>103</sup>

This area, to the south of the qibla dome chamber, is dated by the presence of a Saljuq mihrab. Schroeder, considering it to be the oldest part of the mosque, surmised whether it might not have been a separate entity orig-

<sup>98</sup> See n. 3 above.

<sup>99</sup> G. A. Pugachenkova, *Termes, Schahr-i Sabz, Chiwa*, Berlin, 1981, p. 14, fig. 1; King, "Nine Bay," p. 338.

<sup>100</sup> V. A. Nilsen, *Monumentalnaya Arkhitektura Bukharskogo Oazisa XI-XII vv.*, Tashkent, 1956, pp. 70-83; Allen, "Early Nine-Bay Mosques," n. 6.

<sup>101</sup> The best drawings and illustrations are in V. Voronina, "Nekotorie Dannic o Pamyatnikakh Zodchestva Uzbekistana," *Arkhitekturnoe Nasledstvo*, 3, 1953, pp. 107-19.

<sup>102</sup> Whitehouse, *Siraf*, pp. 45-8.

<sup>103</sup> *A Survey of Persian Art*, ed. A. U. Pope and P. Ackerman, London and New York, 1939, 2, pp. 994, 1033-4, fig. 367; Allen, "Early Nine-Bay Mosques," n. 6.

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inally. It is roofed by very shallow groin vaults.

*Dayr-i Gachin, mosque in caravansaray, 12th century (Fig. 12).*<sup>104</sup>

The present squinch vaults on cross arcades are Safavid; it is thought the building was converted from a fire temple to a mosque in the Saljuq period.

We have seen that the nine-bay plan was used for a variety of building types in pre-Islamic times: domestic architecture both small and large, audience halls, gateways, temples and churches. To these we may add a further range of functions within the Islamic period: refectory, kitchen, cistern, mosque, and tomb or funerary mosque.

As mentioned above, the basic pre-Islamic template could be altered (sometimes simultaneously) in two ways: by substituting vaulting and by altering the size of the bays, primarily to emphasise the central one. This is apparent at the Dīgarān mosque, which stands out as a rare early Islamic example of the quincunx type. Robert Hillenbrand, while discounting Byzantine influence, has already remarked on this similarity to Byzantine domical architecture.<sup>105</sup> But there is no need to invoke even the earlier Syrian examples of quincunxes mentioned above (including Khirbat al-Mafjar) as prototypes. We have seen already that Sogdian residential architecture modified the nine-bay plan to the quincunx type at Aultepe (Fig. 13.3). The rounded piers which support the central dome at Khazara are closer to the nearby mosques of Balkh and Tirmiz than the L-shaped piers of the audience hall at Rusafa and their Byzantine and Armenian successors, suggesting indeed that this is a local variation of the regular nine-bay plan.

Another variation occurs in a residential *kūshk* at Tahmalaj (9-10th centuries).<sup>106</sup> While this has a nine-dome plan, it is one in which each room is distinctly separated from its neighbour by walls, with little inter-communication except on the central row of three bays. Perhaps this residential model was the one adopted for the palace of Tāhir at Bust, noted above.<sup>107</sup> We should remember the likelihood mooted above that fire temples, which as we have seen, especially in Central Asia, frequently had nine-bay plans, were turned into or incorporated within mosques. Once the nine-bay plan had been established as a possibility for mosques, nine-bay residential buildings such as Aultepe could have encouraged architects to adapt them in ways as different as the Balkh or Khazara examples.<sup>108</sup>

Many of the other mosques in Table 1 have features which set them apart from the examples we have considered earlier: open facades and cross arcades. Should these be seen as a natural development of previous plans, or as an entirely new type of structure? It may be remembered that in the Darb Zubayda, the most frequently occurring series of nine-bay mosques to date, they had all been attached to another building. This attachment obviously interfered with the number of entrances which it was possible to have, and also therefore with symmetry. The predilection for symmetry has always been a strong force in architecture, not least in that of Islam.<sup>109</sup> When erecting freestanding buildings of this type, the very symmetry of the building plan was proba-

<sup>104</sup> Shokoohy, "The Sasanian Caravanserai."

<sup>105</sup> "Abbasid Mosques in Iran," *Rivista degli Studi Orientali* 59, 1985, pp. 203-4.

<sup>106</sup> Another variation, is the residential *kushk* (ninth-tenth centuries?) at Tahmalaj: See G. A. Pugachenkova, Puti Razvitiya Arkhitektury Yuzhnogo Turkmenistana Pory Rabovladieniya i Feodolizma, *Trudy Yuzhno-Turkmenistanskoi Arkheologicheskoi Kompleksnoi Ekspeditsii* 6 (Moscow, 1958), 166-7. It has been discussed by both Golombek ("Abbasid Mosque," p. 188) and Hillenbrand ("Abbasid Mosques," p. 202).

<sup>107</sup> See n. 97 above.

<sup>108</sup> The likelihood of the influence occurring in reverse, from religious to residential architecture, is rather less probable. It is not necessary to assume, as does Golombek ("Abbasid Mosque," p. 188), that the adaptation was of a foreign model.

<sup>109</sup> Ernst Herzfeld, in remarking on the prevalence of aesthetic over practical considerations, remarked that "nowhere is the urge for multiple symmetry so strong as in Iran"

bly enough to commend the idea of having up to three identical facades (e.g. Balkh and Ṭabāṭabā, Cairo, or two, as at Tirmiz and Toledo) and of having arcades parallel to all four, instead of just two walls. We have seen that in the case of one of the earliest on the list, the Bū Fatātā in Susa, there was in fact a slightly earlier mosque in the same town which had just such cross arcades, that of the Ribat (c. 771-788). But it is not necessary to assume that the architects of the examples in the eastern Islamic world were aware of those further west. Such a cross arcade system had already been used for the cistern at Ramla (172/789),<sup>110</sup> and its employment in such a utilitarian context (as in the cistern of the Cordoba great mosque) makes it likely that it was a familiar option for architects, despite the lack of other surviving examples.

When analysing the Christian examples of Nubia, Gardiewicz has argued that their cross-axiality shows influence from Islamic hypostyle buildings, and King, referring to the Dayr al-Muḥarraqa, says that it is "a remarkable instance of the transfer of these types of structures out of the Islamic context into that of Coptic Christianity."<sup>111</sup> Guiseppe Bellafore, when discussing the 12th century churches of Sicily, likewise compares the nine-bay examples to earlier Islamic ones.<sup>112</sup> But as we have seen, the nine-bay examples of the Darb Zubayda themselves come out of a basilical tradition, and it does not take much modification to transform the single axis of the basilical *naos* to the double axis of the symmetrical nine-bay form, or to regularize the spaces within the quincunx into nine-equal ones. Utilitarian buildings such as the refectories and kitchens of monasteries could easily have provided a model for cross-axiality.

### The Nine-Bay Plan: Explanations

Geoffrey King has argued that the nine-bay form was popular because it had an inherent honorific connotation: "Thus, there is a recurrent connection between buildings of the nine bay design and individuals prominent in religion and society."<sup>113</sup> He goes on to demonstrate this with reference to the founders of the various mosques of this type. But the argument is circular—the founder of any medieval mosque who can be identified will by definition be someone prominent in religion and society, otherwise he would not have been in a position to found a mosque. The utilitarian contexts of the nine-bay plan rather suggest that it is no more nor less an honorific form than the single dome or the iwan, a building block to be used as convenience dictates.

But there is a reason why convenience often did dictate this plan, one found within an extraordinary geographical and temporal range. As mentioned above, the diversity comes not so much because all of the examples are necessarily interrelated, but because of the plan's inherent practicality, economy and aesthetic appeal (especially in terms of symmetry). Suppose that an architect wishes to roof an area in the most economical way possible. Four piers or columns at the corners will enable him to roof it by either a flat roof or a dome (Fig. 22.1), the dimensions of which are determined by the maximum length of timbers available for the flat roof,<sup>114</sup> or

("Damascus: Studies in Architecture-I," *Ars Islamica* 9 (1942), 34). His remarks were à propos of the plans of two buildings which indeed have nine-bays plans: the Sasanian Qala'-i Kuhna, Sarpul (*ibid.*, p. 32, fig. 21), and the fifteenth century mausoleum of Bābā Munīr (*ibid.*, 31, fig. 20). These have been excluded from the examples in the main body of the article as their plans are extremely compartmentalized (to a much greater degree than the kushk at Tahmalaj, see n. 103 above), the bays taking up less space than the walls surrounding them. Herzfeld appropriately compares their plans to that of the Sasanian fire temple (that of Gira, southern Fars, *ibid.*, p. 33, fig. 22; for other examples see Huff, "Chahartaq," 4:635-8).

<sup>110</sup> Creswell, *EMA*, 2, pp. 161-4.

<sup>111</sup> Gardiewicz, "Introduction," 96-7; King, "Nine Bay," p. 388.

<sup>112</sup> *Architettura in Sicilia nelle età islamica e normanna (827-194)* (Palermo, 1990), Santa Maria dell' Ammiraglio, 126-9; Santa Maria Maddalena, 132-3; San Cataldo, pp. 136-8.

<sup>113</sup> "Nine Bay," p. 386.

<sup>114</sup> The importance of this is demonstrated most vividly in the Islamic architecture of the East African coast: "The planning of every building is restricted by the span of



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the maximum diameter of the dome, the latter depending both on the materials available and the skill of the dome maker. Then add two columns on each of the four sides of the dome (Fig. 22.2) and one can now have four extra bays. If only one pier is now added at each corner (Fig. 22.3), four more bays, making nine in all, can be roofed. The matter could also be considered in reverse. An architect wants to place a roof on a square building. How can he support a roof with minimum interruption of the interior space? The most economical solution of one column will produce four bays of equal size, but this has the ugly result of encumbering the centre of the room, and preventing movement in a straight line from a doorway, usually in the middle of the wall, to the opposite side of the room. This is particularly unfortunate in a mosque, where the pier would block the view of the centrally placed mihrab.<sup>115</sup> Two or three columns in a square building cannot produce bays of equal size. Four is thus the minimum number of supports needed to provide the focus on centrality and emphasis on axiality which a square plan implies—and has the added felicity of resulting in a plan of heightened symmetry, nine equal bays in three rows of three.

Whether one starts from the central dome or from the outer square may depend on the wish to emphasize part of the plan. Where the central dome is of greatest importance, one obviously starts from the inside out, varying the size of the surroundings, if necessary. It is this procedure which may have been followed in the quincunx plan, where the central dome is usually of greater height and diameter than the others, although there is still a major difference between this and the *hasht bihisht* type, with greater compartmentalization, which I have therefore deliberately excluded from consideration in this paper.<sup>116</sup> Beginning from the outside, on the other hand, may produce a plan which more closely resembles the apadana, where the whole space is least encumbered by supports—an idea that would have appealed particularly to mosque builders, where the faithful line up in rows for prayer. There are also several possibilities within this latter approach, depending on the vaulting, or lack of it. In the case of a flat roof, there may be no directional emphasis from the architecture within the building. A similar lack of directional emphasis results when cross arcades are formed, parallel to each wall, supporting shallow domes or cross-vaults. As we have seen however, many examples have arcades parallel to only one wall, betraying a basilical orientation, and possibly origin, for their plan.

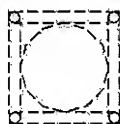
Ground plans generated on paper by the various approaches can look very similar although quite different elevations can result, making it harder to estimate the influences which the different types may have exerted on one another. But it is as well to remember that earlier studies have obscured the potential for influence between different building functions by concentrating on the interrelationships between just one function; the mosque, and downplaying the possibilities of the influence of nine-bay forms in domestic architecture, basilical and temple plans on mosques.

The surviving examples beyond 1200 are naturally much greater. Table 2 is not meant to be comprehensive, especially with regard to later examples, but is designed to give some idea of the ubiquity and persistence of the plan in Islamic architecture.

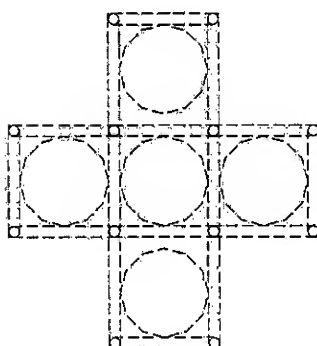
the timber rafters—which never exceeds 2.80m. This places the plans in a dimensional "strait jacket," so restrictive that it is a universal feature of every space—even the vaulted buildings conform to it," P.S. Garlake, *The Early Islamic Architecture of the East African Coast* (Oxford, 1966), 11.

<sup>115</sup> Despite this impracticality, the form is still occasionally found: Jabal Says, mosque, c. 710-5, Creswell, *EMA*, 1/2 (Oxford, 1969), 476, fig. 538; Siraf: mosque at Site P2, ninth-twelfth centuries: Whitehouse, *Siraf*, 48, fig. 26; Bitlis: Dört Sandok Cami, 950-60/1543-52, Vakıflar Genel Müdürlüğü, *Türkiye'de Vakıf Abideler ve Eski Eserler*, 2 (Ankara, 1977), 152; Bitlis, Asagi Kale Cami, 18th c., *ibid.*, 153, Bitlis, Tas Cami, 18th c., *ibid.*, 155. A bedesten in Amasya, 888/1483, is also recorded with the same plan: Vakıflar Genel Müdürlüğü, *Türkiye'de Vakıf Abideler ve Eski Eserler*, 1 (Ankara, 1983), 285. When the only entrance is from the side of the mosque, as in the al-'Ali mosque at Manah, Oman (Monique Kervran, "Mihrab/s omanis du 16e siècle: un curieux exemple de conservatisme de l'art du stuc iranien des époques seldjoukide et mongole," *Archéologie Islamique* 6 [1996], 145, fig. 37), the effect may have been less incongruous.

<sup>116</sup> For studies of this see R. A. Jairazbhoy, "The Taj Mahal in the Context of East and West: A Study in the Comparative Method," *Journal of the Warburg and Courtauld Institutes* 24 (1961), 59-88; Akon, *Asya Merkezi Mekan*, 220-31.



22.1



22.2

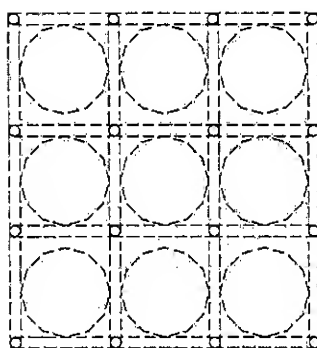


Figure 22.1.2.3 Stages of expansion of domed unit

**Table 2: Nine-bay structures in the Islamic world, after 1200.**<sup>117</sup>

**Maghrib**

*Tilimsan, Sayyidi Abu'l-Ḥasan mosque (696/1296).*<sup>118</sup>

Four columns support arcades perpendicular to the qibla, flat roof.

*Tunis, Muntaṣiriyya madrasa (1437-50)*<sup>119</sup>

<sup>117</sup> I have usually commented on the entrances only if they are numerous.

<sup>118</sup> R. Bourouiba, *L'Art Religieux Musulman en Algérie*, Algiers, 1973, pl. XVIII/1, fig. 42.

<sup>119</sup> A. Daoulati, *Tunis sous les Hafsidés: évolution urbaine et activité architecturale*, Tunis, 196, p. 205, fig. 45.

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Four columns support arcades perpendicular to the qibla, flat roof.

*Tunis, Sīdī Qāsim al-Zalījī zāwīya (before 1496)*<sup>120</sup>

Four columns support arcades parallel to the qibla, flat roof.

Each of the three examples above is rectangular, showing their derivation from basilical plans.

*Granada, Tomasas cistern (undated)*.<sup>121</sup>

Cross arcades support cross vaults.

*Málaga, Marmuyas cistern (9-10th centuries)*.<sup>122</sup>

Cross arcades support cross vaults.

*Granada, Alhambra, Lluvia cistern (13-14th centuries)*.<sup>123</sup>

Four L-shaped piers support a central dome and four groin vaults, barrel- vaults in the intervening bays.

*Libya, Tripoli, Sarāy al-Ḥamra mosque (1044/1633)*.<sup>124</sup>

Cross arcades, nine equal domes.

### Egypt and Syria

*Aleppo citadel, room added above main gate (807-20/1404-17)*.<sup>125</sup>

Cross arcades, domed. The history of this room is a cautionary tale with regard to planning a nine-bay space: make sure you have beams of the necessary length (the span of each bay is 9m). Sayf al-Din Chakam, who ordered the room to be built, was unable to carry on when the beams brought from Ba'albak were too short; only when al-Mu'ayyad ordered beams from "the region of Damascus" (i.e. another part of Lebanon) were they sufficient for the job.

*Cairo, northern cemetery, complex of al-Ashraf Barsbay (1432) (Fig. 1)*.<sup>126</sup>

The mosque in this complex (according to its *waqfiyya* it functioned as a madrasa for four *hanafi* students) is a square room with four columns supporting arcades parallel to the qibla and a flat roof. This basilical orientation is made even more evident by lowering the floor of the central aisle, providing a passageway to the adjacent tomb. Surprisingly, the two raised prayer areas are termed *iwans* in the *waqfiyya*.<sup>127</sup>

*Cairo, Maḥmūd Pāshā mosque (1567) (Fig. 2)*<sup>128</sup>

<sup>120</sup> *Ibid.*, p. 225, fig. 58.

<sup>121</sup> Maldonado, *Tratado*, p. 23, fig. 11.

<sup>122</sup> *Ibid.*, p. 24, fig. 12.

<sup>123</sup> *Ibid.*, p. 24, fig. 9.

<sup>124</sup> Salāh Aḥmad al-Bahnāsī, "Al-ta'ḥrīrāt al-'uthmāniyya 'alā al-'imara wa'l-funūn al-islāmiyya fi Libya mundhu badāyat al-'aṣr al-'uthmānī al-awwāl wa hatta nihāyat al-'aṣr al-'uthmānī al-thānī, 958-1330/1551-1911," in *Actes du IIème Congrès du Corpus d'Archéologie Ottomane dans le Monde: architectures des demeures, inscriptions funéraires et dynamique de restauration*, ed. Abdeljelil Temimi, Zaghouan, 1998, p. 77, fig. 8.

<sup>125</sup> Ernst Herzfeld, *Matériaux pour un Corpus Inscriptionum Arabicarum, part II: Syrie du Nord: inscriptions et monuments d'Alep*, Mémoires de l'Institut Français Orientale du Caire, 76-7, Cairo, 1954-5, pp. 94-5, pl. XXVI.

<sup>126</sup> Leonor Fernandes, "Three Sufi Foundations in a 15th Century Waqfiyya," *Annales Islamologiques* 17, 1981, plan opp. p. 146.

<sup>127</sup> This is less surprising given the growing influence on domestic religious architecture in Mamluk architecture: see Bernard O'Kane, "Domestic and Religious Architecture in Cairo: Mutual Influences," *The Cairo Heritage: Studies in Honor of Laila Ali Ibrahim*, ed. Doris Behrens-Abouseif, Cairo, 2000, pp. 149-82.

<sup>128</sup> Seif El Rashidi, "Early Ottoman Architecture in Cairo: In the Shadow of Two Imperial Styles", unpublished MA thesis, American University in Cairo, 1999, pp. 18-20.

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Four columns, flat roof. This shares with the complex of al-Ashraf Barsbay above the unusual lowered corridor running across the middle of the mosque (in this case leading to the ablutions area), but, as mentioned in the introduction above, it has a unique approach to the central bay, framing it by four arches that give the impression of a reduced four-*iwan* plan.

*Cairo, Masīḥ Pāshā mosque (1575).*<sup>129</sup>

Four T-shaped piers support arcades parallel to the qibla, flat roof.

*Cairo, Murād Pāshā mosque (1578).*<sup>130</sup>

Arcades parallel to the qibla, flat roof.

*Cairo, 'Abdīn Bey mosque (1660) (Fig. 23).*<sup>131</sup>

Four piers with cross arcades, large dome over mihrab bay, central skylight, six domes on the two sides.

*Cairo, Ribat al-Āthār (1667).*<sup>132</sup>

Arcades parallel to the qibla, flat roof.

*Damascus, Khān Asad Pāshā (1753).*<sup>133</sup>

The square courtyard of this khān is roofed with nine equal domes supported on four piers.

*Cairo, Shajarat al-Durr complex, mosque (1877).*<sup>134</sup>

This mosque, now lost, was reconstructed by the Comité. It seems to have had four columns supporting arcades parallel to the qibla and a flat roof.

*Cairo, al-Rifā'i mosque (1869-1911).*<sup>135</sup>

The central core is of nine bays, the central one domed, those surrounding flat roofed. Piers with engaged columns support cross arcades.

### Arabian Peninsula

*Yemen, al-Mukhā, 'Alī b. 'Umar al-Shādhilī mosque (842/1418).*<sup>136</sup>

Four columns, cross-arcades, higher central dome.

*Oman, Nizwa, al-Shawadna mosque (936/1530).*<sup>137</sup>

Four columns, arcades parallel to qibla, flat roof.

<sup>129</sup> *Ibid.*, 22-3.

<sup>130</sup> *Ibid.*, 23-4.

<sup>131</sup> *Ibid.*, 31-2.

<sup>132</sup> *Ibid.*, 34-5.

<sup>133</sup> André Raymond, *Grandes villes arabes à l'époque ottomane*, Paris, 1985, 259, fig. 20.

<sup>134</sup> Doris Behrens-Abouseif, "The Lost Minaret of Shajarat ad-Durr at Her Complex in the Cemetery of Sayyida Naftsa," *Mitteilungen des Deutschen Archäologischen Instituts: Abteilung Kairo* 39, 1983, Fig. 3.

<sup>135</sup> Mohammad al-Asad, "The Mosque of al-Rifa'i in Cairo," *Muqarnas* 10, 1993, fig. 11. The question of the plan is not addressed in this article, perhaps because, as I heard the author state in reply to a question at his lecture on the mosque, he thought it was European. The previous examples show that it is very much in the Cairene Ottoman tradition.

<sup>136</sup> King, "Nine Bay," pp. 370-1.

<sup>137</sup> Kervran, "Mihrab/s omanis," p. 152, fig. 47.

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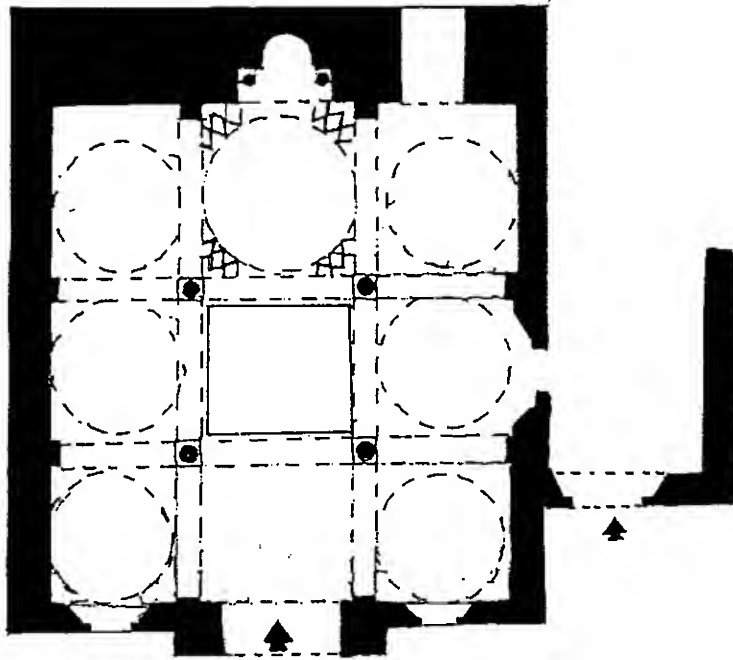


Figure 23 Cairo, 'Abdin Bey mosque (1660) (after El Rashidi)

### *Yemen, Madar, al-Hādī mosque.*<sup>138</sup>

No dating is given for this mosque which has a flat roof and four piers supporting arcades parallel to the qibla.<sup>139</sup>

### **East Africa**

#### *Mogadishu, Fakhr al-Din mosque (13th century) (Fig. 24).*<sup>140</sup>

This is a remarkable example where nine bays occur at vaulting level only and are supported on two columns by means of cross beams. The central bay is domed.

#### *Tanzania, Kilwa, small domed mosque (15th century).*<sup>141</sup>

Four piers support cross arcades and domes. The three central bays on the mihrab axis are square, those to either side slightly rectangular. Entrances to every bay except the mihrab.

#### *Tanzania, Kilwa, Jangwani mosque (15th century).*<sup>142</sup>

Four piers support cross arcades and domes. One entrance on each side other than the qibla.

<sup>138</sup> Scerrato et al., "Report," fig. 55.

<sup>139</sup> Finster, "Islamic Religious Architecture," 126, writing of "cubical mosques with only four or even two supports," includes "the Masjid al-Dar in Jibla (mid-thirteenth century), the Masjid al-'Arraf from 1081 (the constructional history of which is problematic), and the mosque of Qaydan near Tawila...later thirteenth or fourteenth century." I have no further information on these monuments to indicate which might have two, and which four supports.

<sup>140</sup> Garlake, *Early Islamic Architecture*, 13, fig. 66.

<sup>141</sup> Garlake, *Early Islamic Architecture*, 138, fig. 17; King, "Nine Bay," pp. 371-3.

<sup>142</sup> Garlake, *Early Islamic Architecture*, 138, fig. 17; King, "Nine Bay," pp. 373-4.

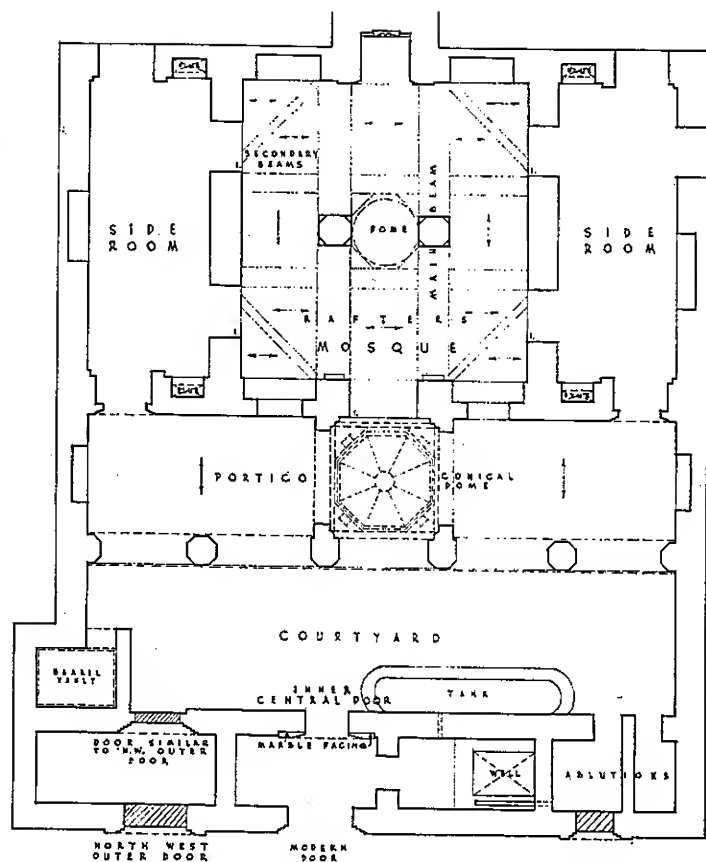


Figure 24 Mogadishu, Fakhr al-Din mosque (13th century) (after Garlake)

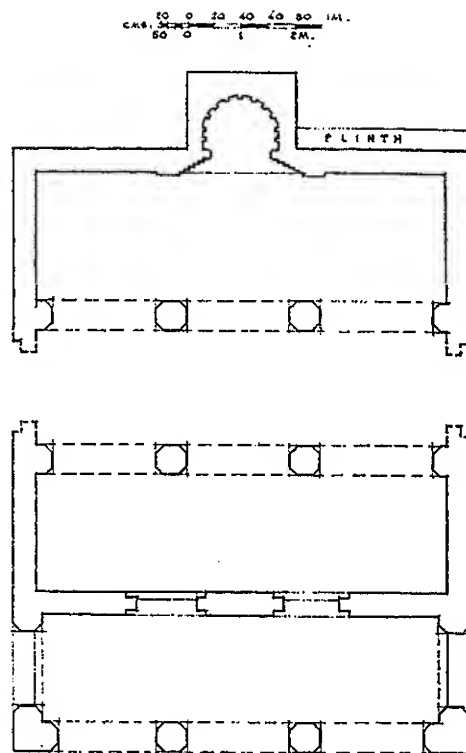


Figure 25 Songo Mnara, main mosque (mid-16th century) (after Garlake)

*Kenya, Mnarani, small mosque (16th century).*<sup>143</sup>

Nine slightly rectangular bays, four octagonal piers.

*Shengeju, mosque (16th century).*<sup>144</sup>

Four rectangular columns.

*Songo Mnara, main mosque (mid 16th century) (Fig. 25).*<sup>145</sup>

Porch, four octagonal piers support arcades parallel to the qibla.

*Ukutani, mosque (16th century ?).*<sup>146</sup>

The plan is markedly rectangular, with the qibla on the narrow side. Four square piers.

*Utondwe, mosque (17th century ?).*<sup>147</sup>

The plan is slightly rectangular, with the qibla on the narrow side. Four square piers.

<sup>143</sup> Garlake, *Early Islamic Architecture*, pp. 56, 81, fig. 19.

<sup>144</sup> *Ibid.*, 41, 44, fig. 26.

<sup>145</sup> *Ibid.*, 71, fig. 48.

<sup>146</sup> *Ibid.*, 6, fig. 46.

<sup>147</sup> *Ibid.*, 6, fig. 45.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

*Kua, three small mosques (18th century).*<sup>148</sup>

Each had arcades parallel to the qibla, two on octagonal, one on square piers.

*Chole/Kaole Mafia, mosque (late 18th century).*<sup>149</sup>

Four octagonal piers and engaged columns on the side walls support arcades parallel to the qibla.

*Kipumbwe, Mji Mkuu, mosque (19th century).*<sup>150</sup>

Four octagonal piers and engaged columns on the side walls support arcades parallel to the qibla.

*Kisikimto, mosque (19th century).*<sup>151</sup>

Four octagonal piers and engaged columns on the side walls support arcades parallel to the qibla.

*Tundwa, mosque (19th century).*<sup>152</sup>

Four rectangular piers support arcades parallel to the qibla.

### Turkey:

*Bor, Sari mosque (1205-6).*<sup>153</sup>

Rectangular prayer hall, four small columns support arcades parallel to the qibla, flat roof.

*Kemer Hisar, great mosque (13th-14th C).*<sup>154</sup>

According to Gabriel, this has the same plan as that of the Sari mosque above.

*Kastamonu, Maḥmūd Bey mosque (1366).*<sup>155</sup>

Four wooden piers, wooden roof.

*Edirne, Eski Cami (805-16/1403-14).*<sup>156</sup>

Four stone piers support cross arcades and nine equal domes.

*Dimetoka, Çelebi Sultan Mehmed mosque (825/1421) (Fig. 26).*<sup>157</sup>

Quincunx: four piers support a large central dome, corner cross vaults, axial barrel vaults; three bay narthex. King notes Aslanapa's references to parallels with the Dīḡgarān mosque for this building. However, this is sure-

<sup>148</sup> *Ibid.*, 67, figs. 43-4.

<sup>149</sup> *Ibid.*, 71, fig. 50.

<sup>150</sup> *Ibid.*, 71, fig. 53.

<sup>151</sup> *Ibid.*, fig. 54.

<sup>152</sup> *Ibid.*, fig. 61.

<sup>153</sup> Gabriel, *Monuments turcs d'Anatolie*, 1931, p. 155.

<sup>154</sup> Gabriel, *Monuments turcs d'Anatolie*, 1931, p. 155.

<sup>155</sup> Behçet Ünsal, *Turkish Islamic Architecture: Seljuk to Ottoman*, London, 1970, fig. 1a.

<sup>156</sup> Ünsal, *Turkish Islamic Architecture*, fig. 4b; King, "Nine Bay," pp. 366-8.

<sup>157</sup> Oktay Aslanapa, *Turkish Art and Architecture*, London, 1971, p. 220, Plan 40; Aptullah Kuran, *The Mosque in Early Ottoman Architecture*, Chicago, 1968, p. 196, fig. 220; King, "Nine Bay," pp. 368-9.

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ly a case of Turkish nationalism ignoring geographically and chronologically closer parallels, the numerous Byzantine quincunxes in the area.

*Elbistan, great mosque (1498).*<sup>158</sup>

Quincunx: four piers, large central dome, axial semi-domes.

*Bor, Sari 'Ali mosque (c. 15th century).*<sup>159</sup>

Rectangular prayer hall, four small columns support arcades parallel to the qibla, flat roof.

*Diyarbakir, Fâtih Pâshâ mosque (1516-20).*<sup>160</sup>

Quincunx: four piers support a large central dome, smaller corner domes, axial semi-domes.

*Istanbul, Shezade mosque (1544).*<sup>161</sup>

Quincunx: four piers support a large central dome, smaller corner domes, axial semi-domes.

*Karapinar, Sultan Selim complex, caravanseray (1563-4).*<sup>162</sup>

The conjectural restoration of the caravanserai shows it as having two nine-bay units, each with cross arcades

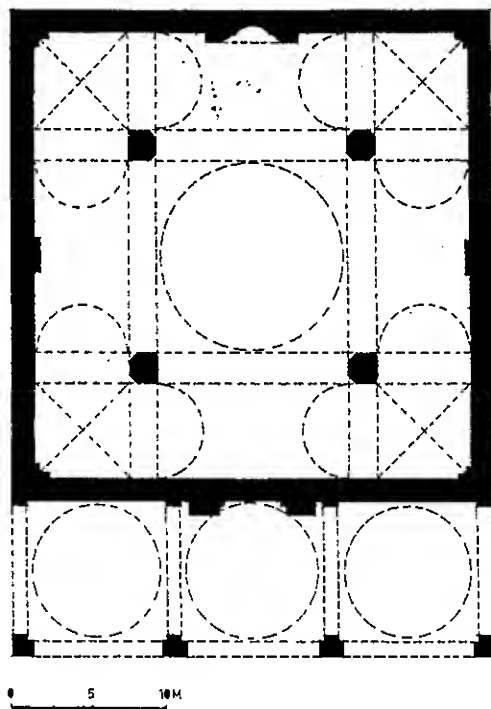


Figure 26 Dimetoka, Mosque of Chelebi Sultan Mehmed

<sup>158</sup> Aslanapa, *Turkish Art and Architecture*, 215, fig. 164.

<sup>159</sup> Gabriel, *Monuments turcs d'Anatolie*, 1931, p. 154.

<sup>160</sup> Aslanapa, *Turkish Art and Architecture*, pp. 214-5, Plan 46; Kuran, *The Mosque*, fig. 221.

<sup>161</sup> Kuran, *The Mosque*, fig. 222.

<sup>162</sup> Aptullah Kuran, *Sinan, the Grand Old Master of Ottoman Architecture*, Washington and Istanbul, 1987, p. 167, fig. 175.



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and barrel vaults.

*Adilcevaz, Zal Pāshā mosque (16th century) (Fig. 27).*<sup>163</sup>

Four piers, cross arcades, nine equal domes, three-domed porch.

*Istanbul, Yeni Valide mosque (late 16th century).*<sup>164</sup>

Quincunx.

*Diýarbakir, Nasuh Pāshā mosque (1015-1020/1606-1611).*<sup>165</sup>

Quincunx: large central dome, surrounding areas all cross-vaulted.

*Bitlis, Adilcevaz Pāshā mosque (16th century).*<sup>166</sup>

Cross arcades, nine equal domes, three-domed porch.

*Barsema, mosque (974/1567) (Fig. 28).*<sup>167</sup>

Four square piers support arcades parallel to the qibla. The roof, now destroyed, would have been flat.

*Ankara, Aktash mōsque, (16-17th centuries).*<sup>168</sup>

Rectangular prayer hall, four small columns support arcades perpendicular to the qibla, flat roof.

*Dogubeyazid, Ishakpāshā palace, mosque (1784).*<sup>169</sup>

Cross arcades. The nine-bay room is adjacent to the main dome chamber and could have functioned as a lecture hall or for overspill. Its bays are irregular, particularly so in that the central bay is rectangular.

*Antalya, Boztepe Köyü Hacı Hasan Agā mosque (1236/1820).*<sup>170</sup>

Four columns support cross arcades; large central dome, other bays barrel vaulted.

*Artvin-Ardanuç, Iskenderpasha mosque (1281/1864).*<sup>171</sup>

Four piers support a large central dome.

### Iran:

*Takht-i Sulayman, large four-columned room (13th century) (Fig. 29.1)*<sup>172</sup>

<sup>163</sup> *Ibid.*, 122, figs. 109-10.

<sup>164</sup> Godfrey Goodwin, *A History of Ottoman Architecture*, London, 1971, p. 341, fig. 340.

<sup>165</sup> M. Sözen, *Diýarbakır'da Türk Mimarisi*, İstanbul, 1971, p. 104, fig. 31.

<sup>166</sup> *Türkiye'de Vakıf Abideler ve Eski Eserler*, 2, Ankara, 1977, p. 231-7.

<sup>167</sup> Gabriel, *Monuments turcs d'Anatolie*. I. Kayseri-Nigde, Paris, 1931, p. 92.

<sup>168</sup> *Türkiye'de Vakıf Abideler ve Eski Eserler*, 1, Ankara, 1983, pp. 487-8.

<sup>169</sup> *Ibid.*, p. 192.

<sup>170</sup> *Ibid.*, pp. 583-5.

<sup>171</sup> *Ibid.*, p. 755.

<sup>172</sup> Rudolph Naumann, *Die Ruinen von Tacht-e Suleiman und Zendan-i Suleiman und Umgebung*, Deutsches Archäologisches Institut, Abteilung Tehran, *Führer zu archäologischen Plätzen in Iran*, 2, Berlin, 1977, figs. 82-3; Tomoko Masuya, "The Ilkhanid Phase of Takht-i Sulaiman," unpublished Ph.D. dissertation, New York University, 1997, 1, pp. 139-40.

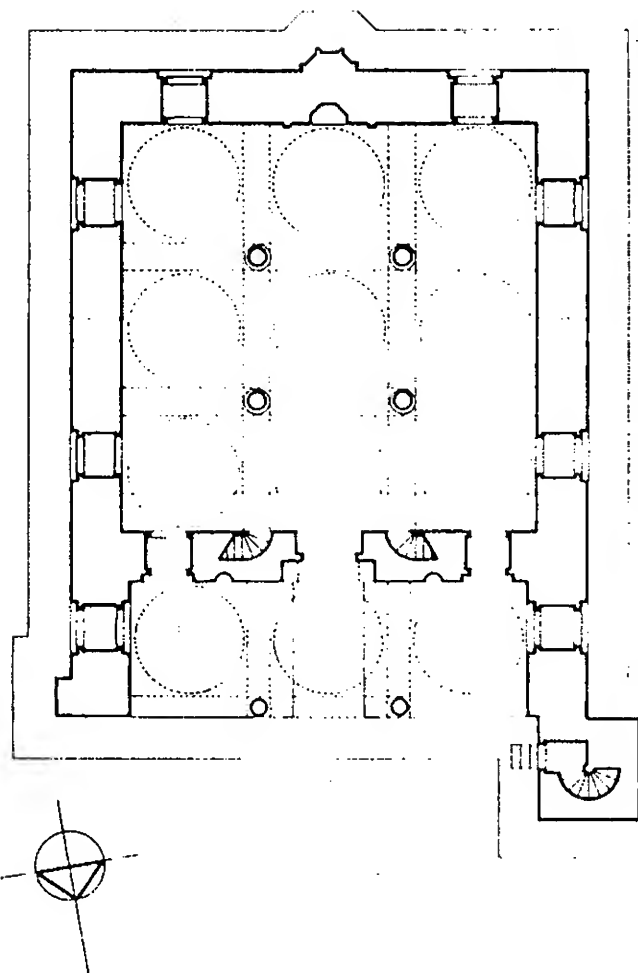


Figure 27 Adilcevaz, Azl Pāshā mosque (16th century) (after Kuran)

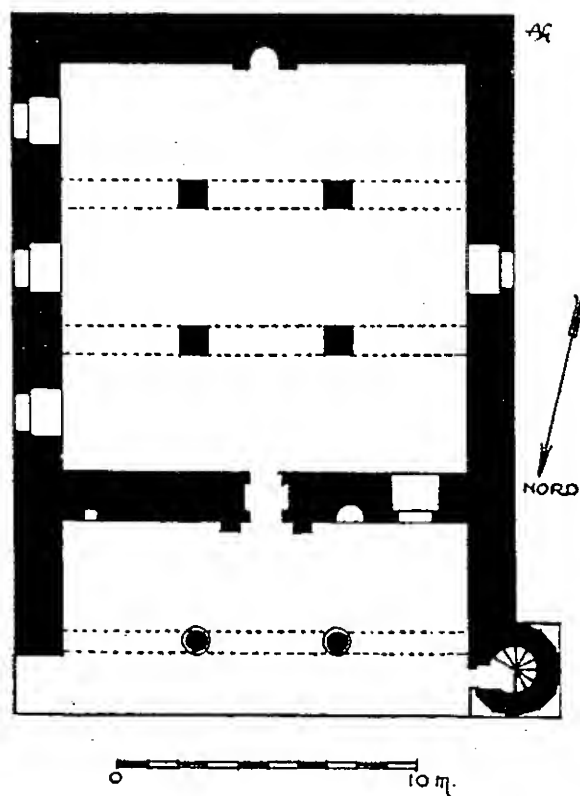


Figure 28 Barsema, mosque (974/1567) (after Gabriel)

Suggested functions for this room have been as varied as assembly hall, residence, mausoleum, city hall, court-house and Buddhist temple. Given the versatility of the nine-bay plan, none of these could be ruled out on the basis of the form alone. The column bases have survived; Kleiss has proposed that it was roofed with a central wooden dome and flat roof elsewhere. If so the 7.5m span of the central bay would make this one of the largest examples.

*Takht-i Sulayman, small four-columned room (post 13th century ?) (Fig. 29.2).*<sup>173</sup>

This was similar to the larger room, but the bases and drum were apparently reused.

*Natanz, Kūcha-yi Mir mosque (early 14th century).*<sup>174</sup>

Four square piers, two arcades parallel to the qibla.

<sup>173</sup> Masuya, "Ilkhanid", 1, p. 140.

<sup>174</sup> Plan in W. Kleiss, "Hinweise zu einigen seldjuqischen und il-khanidschen Bauten in Iran," *Archeologische Mitteilungen aus Iran*, n.f. 10, 1977, p. 297, fig. 5; for the date see Bernard O'Kane, "Natanz and Turbat-i Jam: New Light on Fourteenth Century Iranian Stucco," *Studia Iranica* 21, 1992, pp. 85-92.

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*Asnaq, Friday mosque (733/1332-3).*<sup>175</sup>

Four stone columns support a flat roof.

*Quhrūd, 'Ali mosque (700-36/1300-35).*<sup>176</sup>

Four octagonal piers support cross arcades and nine roughly equal shallow domes.

*Hurmuz, site K103, mosque (13th century).*<sup>177</sup>

The building is an irregular rectangle enclosing four piers.

*Khurs, mosque (15th century or later).*<sup>178</sup>

This has brick walls and stone piers, cross vaulting and nine equal domes. There are three entrances on each side except the qibla, which has two. Kleiss dates it to the fourteenth century or later, but the vaulting suggests a Timurid date at the earliest.

*Sarāvar, Friday mosque (c. 811/1409).*<sup>179</sup>

Four wooden columns support a flat roof.

*Varkand, mosque (14-15th century ?).*<sup>180</sup>

Siroux's datings are often optimistically early, and unfortunately no photograph is given of the building. The four piers that support the dome are closer to the qibla than the entrance, forming eight other bays of varying sizes.

*Echkarand ('Ishqarand?), mosque B, shabistān (Ilkhanid ?).*<sup>181</sup>

Four square piers supported cross arcades and probably nine domes. Although the break in bond on the lower walls shows that the *shabistān* was started later than the adjacent prayer hall, the communicating upper walls indicate that it was finished at nearly the same time. The same caveat on the dating above applies here.

*Baku, Shīrvān Shāh complex, Kay Qubād mosque (15th century).*<sup>182</sup>

This no longer extant building, built against an earlier tomb, was itself built on earlier foundations. It had a quincunx plan, with four squat piers supporting cross arcades and a large central dome; the surrounding bays were flat-roofed.

<sup>175</sup> Bernard O' Kane, "The Friday Mosques of Asnak and Saravar," *Archaeologische Mitteilungen aus Iran* n.f. 12, 1979, (published 1980), fig. 1; also reprinted in *idem*, *Studies in Persian Art and Architecture*, Cairo, 1995, no. XI.

<sup>176</sup> Oliver Watson, "The Masjid-i Ali, Quhrud: an Architectural and Epigraphic Study," *Iran* 13, 1975, 59-74; King, "Nine Bay," p. 366.

<sup>177</sup> Peter Morgan, "New Thoughts on Old Hormuz: Chinese Ceramics in the Hormuz Region in the Thirteenth and Fourteenth Centuries," *Iran* 29, 1991, fig. 5.

<sup>178</sup> W. Kleiss, "Bericht über Erkundungsfahrten in nordwest-Iran im Jahre 1969," *Archaeologische Mitteilungen aus Iran* n.f. 3, 1970, p. 123, fig. 12, pls. 59.2, 60. The mosque's nine-bay context was first noted in Allen, "Early Nine-Bay Mosques," n. 6.

<sup>179</sup> O' Kane, "The Friday Mosques," fig. 5.

<sup>180</sup> Maxime Siroux, *Anciennes voies et monuments routiers de la région d'Ispahân*, Cairo, 1971, p. 211, fig. 70; *idem*, "L'évolution des antiques mosquées rurales de la région d'Ispahan," *Arts Asiatiques* 26 (1977), 78, fig. 14; Allen, "Early Nine-Bay Mosques," n. 6.

<sup>181</sup> Siroux, *Anciennes voies*, 248-9, fig. 83.

<sup>182</sup> Useinov et al., *Istoria arkhitektury Azerbaydzhana*, p. 205, fig. 193.

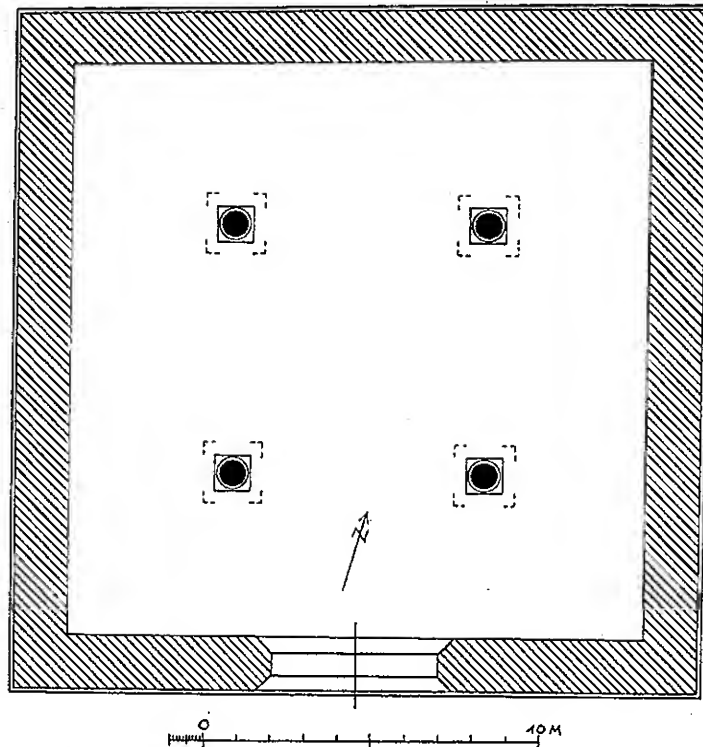


Figure 29 Takht-i Sulayman, large four-columned room  
(13th century) (post 13th century) (after Kliess)

*Kūhpāya, Ḥusayniyya, mosque (16-17th century).*<sup>183</sup>

Nine shallow domes, cross arcades, four brick piers.

*Shiraz, 'Atīq mosque (16-17th century ?).*<sup>184</sup>

Like the earlier Malik mosque in Kirman, this area of a much larger mosque seems to have been conceived as a *shabistān* or winter mosque. Judging from the squinch-nets of the domes (roughly equal in size, cross arcades on brick piers), this part is not likely to be earlier than Safavid.

*Fīrūzkūh, Gaduk, caravansaray (17th century).*<sup>185</sup>

The central area is roofed with nine equal domes on cross arcades.

*Kirman-Sirjan, Sangtaw, caravansaray (Safavid) (Fig. 30).*<sup>186</sup>

The central area is roofed with nine equal domes on cross arcades.

<sup>183</sup> Siroux, "Kouh-Payeh: la mosquée d'jum'a et quelques monuments du bourg et de ses environs," *Annales Islamologiques* 6, 1966, p. 158, pl. XVI.

<sup>184</sup> Donald Wilber, *The Masjid-i 'Atiq of Shiraz*, The Asia Institute, Monograph Series, 2, Shiraz, 1972, pp. 20-1, pl. 35, fig. 12.

<sup>185</sup> Muhammad Yusuf Kiyani and Wolfram Kleiss, *Karvansarayha-yi Iran*, 1, Tehran, 1362/1983, p. 41.

<sup>186</sup> *Ibid.*, p. 34.

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*Kirman-Sirjan, Khāna-yi Surkh, caravansaray (Safavid).*<sup>187</sup>

The central area is roofed with nine equal domes on cross arcades.

*Khurasan, Ribat-i Fakhr Dāwūd (Safavid).*<sup>188</sup>

The central area is roofed with nine equal domes on cross arcades.

*Sabzivar, Ribat-i Sarpūsh (Safavid or Qajar).*<sup>189</sup>

This is essentially a quincunx, the central bay being square and the others rectangular. The vaulting is not marked on the plan, but is likely to be brick squinch vaults.

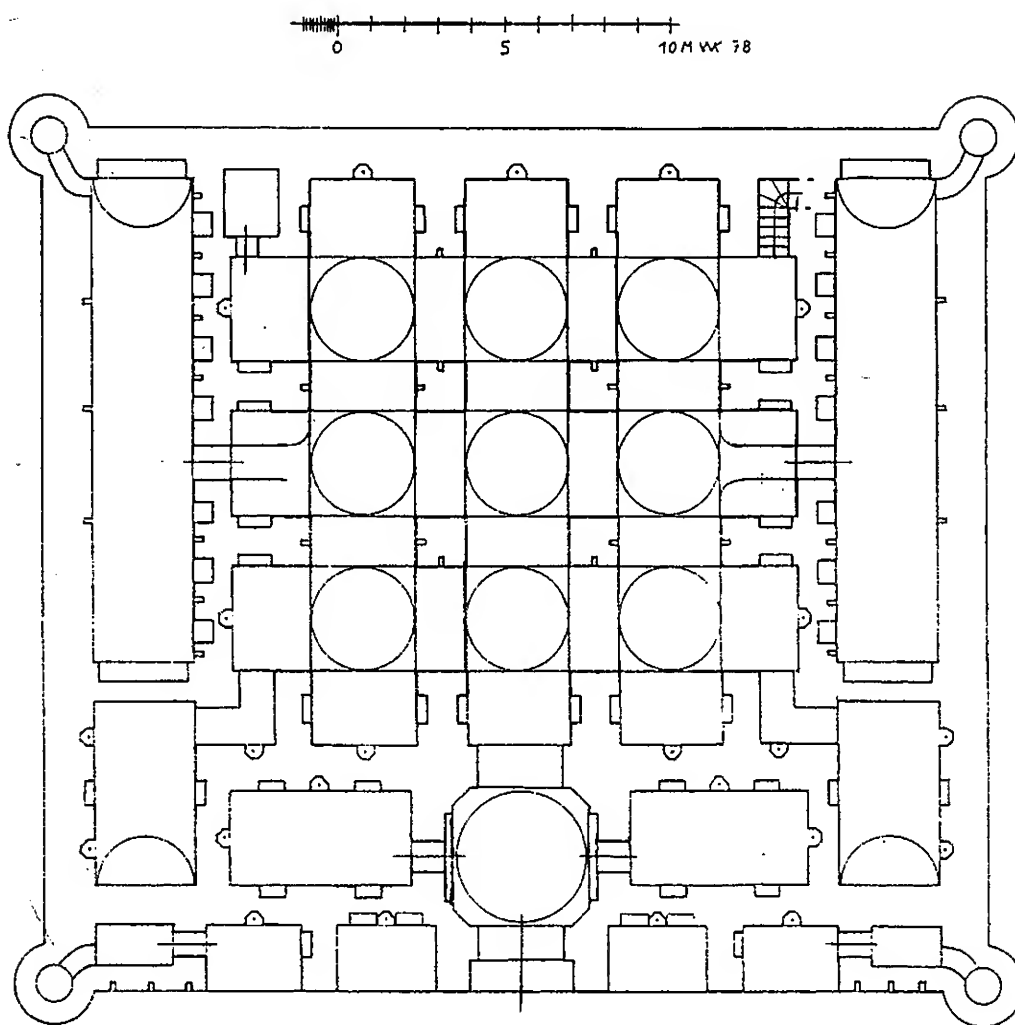


Figure 30 Kirman-Sirjan, Sangtaw, caravansaray (Safavid) (after Kleiss)

<sup>187</sup> *Ibid.*, p. 35.

<sup>188</sup> *Ibid.*, p. 242.

<sup>189</sup> *Ibid.*, p. 242.

*Bandar 'Abbās-Lār, Tang Dalūn, caravansaray (19th century).*<sup>190</sup>

Cross arcades, nine equal domes.

*Azerbaijan, houses (19th century).*<sup>191</sup>

Two are illustrated; each has a single room with a porch; each room has four wooden columns supporting a flat or sloping roof. Useinov notes that this type is of great antiquity and is widespread throughout the Caucasus.

*Sabzivar, Pāmanār mosque (undated).*<sup>192</sup>

Maulavi discusses mainly the long history of this mosque, which has a Saljuq minaret. Its portal has modern tilework, but no photographs of the interior are shown. It has nine equal domes resting on piers with cross arcades. The photographs of the exterior suggest a fairly recent date.

#### Central Asia:

*Bishdagh, Golden Horde state tent (14th century).*<sup>193</sup>

"At this place there has been erected a huge *barka* (*bargah*), a *barka* in their language being a large tent supported by four wooden columns covered with plaques of silver coated with gold, each column having at its top a capital of silver gilt that gleams and flashes... In the centre of the *barka* is set up an immense couch which they call the *takht*... upon which sit the sultan and principal khatun." It should not be surprising that portable architecture should also make use of the ability of the nine-bay form to create an interior as unimpeded as possible, and to accentuate the central bay sufficiently to complement the royal entourage.

*Astānabābā, mausoleum of Ubayd and Zubayd, annex (undated).*<sup>194</sup>

The annexe, consisting of nine equal domes supported on four square piers, was built against an earlier possible Saljuq period mausoleum. No photographs have been published that might permit an estimate of the date.

*Fudina, Ḥusām-'Atā complex, mosque (16th century or later?) (Fig. 31).*<sup>195</sup>

Like the above, this is an addition to an earlier (11th century) mausoleum. Cruciform piers support cross arcades; only six of the bays are now domed, in an irregular pattern.

*Khvarizm, Khanka, madrasa and mosque (18th century).*<sup>196</sup>

This unusual hybrid has a self-contained mosque with nine equal domed bays supported on cross arcades.

*Vakhshuvar, mosque and hall (1713) (Fig. 32).*<sup>197</sup>

This complex boasts four wooden-columned mosque with a flat roof and a wooden-columned porch on two

<sup>190</sup> Muhammad Yusuf Kiyani, W. Kleiss, *Karvansarayha-yi Iran*, 2, Tehran, 1368/1989, p. 82.

<sup>191</sup> M. Useinov, L. Bretanitskii and A. Salamzade, *Istoria arkhitektury Azerbaydzhana*, Moscow, 1963, pp. 10-1, figs. 2-3.

<sup>192</sup> Abd al-Ḥamīd Maūlavī, *Āḥār-i Bāstānī-yi Khurāsān*, Tehran, 1354/1975, p. 440.

<sup>193</sup> *The Travels of Ibn Battuta*, 2, p.494.

<sup>194</sup> Pugachenkova, *Puti Razvitiya Arkhitektury Yuzhnogo Turkmenistana*, p. 288; Allen, "Early Nine-Bay Mosques," n. 6.

<sup>195</sup> L. Mankovskaya, *Arkhitekturnie Pamyatniki Kashkadari*, Tashkent, 1971, pp. 40-1.

<sup>196</sup> *Idem*, *Tipologicheskie Osnovi Zodchestva Srednei Azii (IX – nachalo XXv.)*, Tashkent, 1980, fig. 15a.

<sup>197</sup> L. I. Rempel, "Narodnaya Arkhitektura Predgornoi Zoni Yuga Uzbekistana," *Iskusstvo Zodchikh Uzbekistana* 4, Tashkent, 1969, p. 175, fig. 10.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

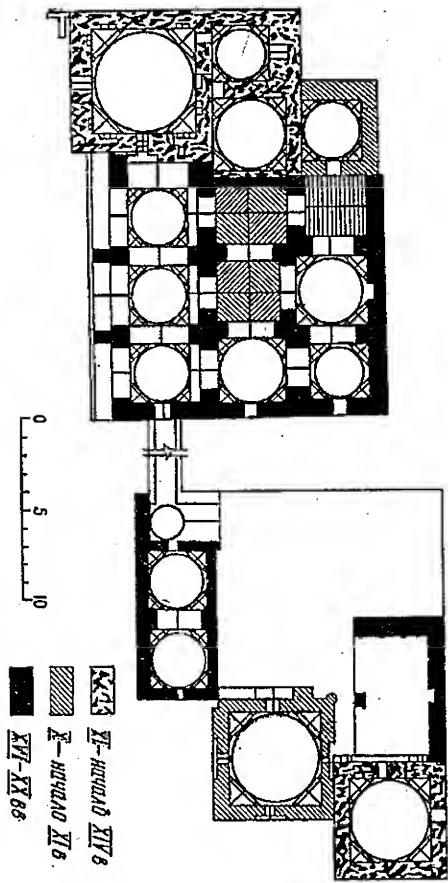


Figure 31 Fundina, Ḥusām-'Atā complex, mosque (16th Century or later?) (after Mankovskaya)

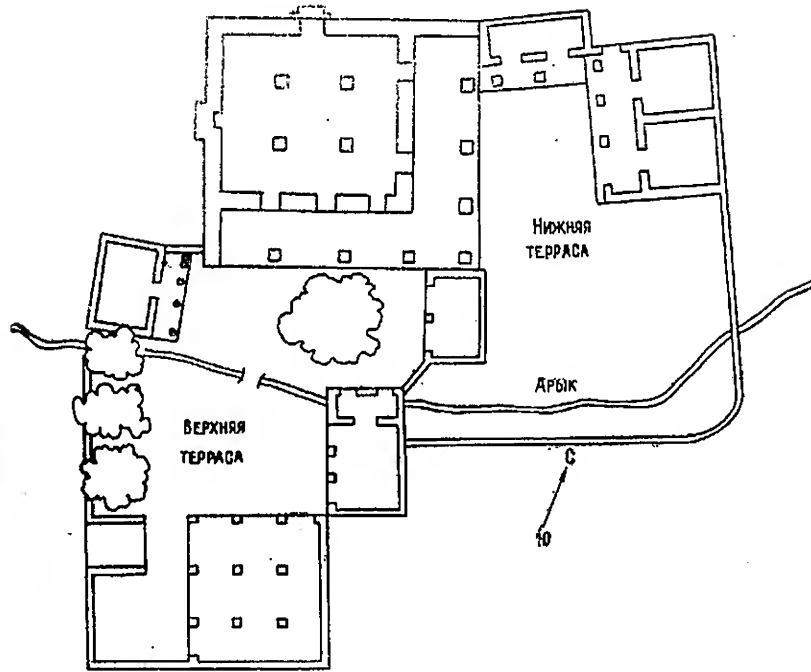


Figure 32 Vakhshuvar, mosque and hall (1713) (after Rempel)

sides, and a southern terrace with a four-columned hall open on two sides to the terrace and supported on its open sides by wooden columns aligned with those on the interior.

*Ayli, mosque (19th century).*<sup>198</sup>

This is similar to the mosque of Vakhshuvar above, but with a porch on three sides.

*Khiva, Old Ark, winter mosque (19th century).*<sup>199</sup>

The adjacent summer mosque is dated to 1838. This has four wooden columns supporting a flat roof.

*Khiva, 'Atā Murād mosque (1800).*<sup>200</sup>

This mosque has two halls; in that on the qibla side four wooden columns support the flat roof.

*Kirghizstan, mosque (19th-early 20th century).*<sup>201</sup>

<sup>198</sup> *Ibid.*, fig. 14.

<sup>199</sup> L. Mankovskaya, V. Bulatova, *Pamyatniki Zodchestva Khorezma*, Tashkent, 1978, p. 54, fig. 44.

<sup>200</sup> *Ibid.*, 71, 142-4, fig. 66.

<sup>201</sup> V. Nusov, *Arkhitektura Kirgizii s Drevishikh Vremen do Nasikh Dnei*, Firunze, 1971, fig. 66.

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Among the mosque types illustrated in Kirghiz are those with one, two or four-columned interiors. These are almost certainly flat-roofed, with wooden pillars; the examples shown have a columned porch on three sides.

*Panjikent, houses (19th century).*<sup>202</sup>

Wooden four-columned reception rooms figures frequently in these plans.

*Tajikistan, Ainiski district, bath (early 20th century).*<sup>203</sup>

The main outer room is rectangular with four wooden columns.

*Nūristān, houses (19th-20th century) (Fig. 33).*<sup>204</sup>

The standard house plan in Nūristān is one with a (wooden) four-columned interior; the central bay is frequently covered with a corbelled dome of successively smaller squares. Its popularity in this region may be due to the confluence of two factors: the tradition of four-columned rooms in central Asia houses (see above) and the concepts of ideal planning in Hindu architecture (see below).

### Indian Subcontinent

Before listing the Islamic examples of this type, it is worth noting the importance which the nine-bay plan played in the conception of the ideal Hindu temple and palace. The mandala, a sacred geometric diagram of the essential structure of the universe, governs the ideal plan. Although this could take several forms, that which was considered most auspicious was a mandala of nine squares, each square of which in turn was divided into nine squares.<sup>205</sup> The popularity of this scheme is reflected in the plans of numerous Hindu and Jain temples from the early medieval period onwards (Fig. 34)<sup>206</sup> to such late manifestations as the city plan of Jaipur.<sup>207</sup>

*Junagadh, al-Irajī mosque (685/1286-7) (Fig. 35).*<sup>208</sup>

In its original state this treabate building the main prayer hall had nine equal, slightly rectangular, bays, preceded by a six-bay narthex.

*Delhi, Jahānpanāh mosque (c. 1343).*<sup>209</sup>

The royal *maqsura* on the northeast side of the mosque has a quincunx plan with a central and four corner domes, the other bays being groin vaulted.

*Baltistan, Chakchan, Friday mosque (mid-14th century).*<sup>210</sup>

Although the building has been repaired many times, Dani suggests that the local reports associating the

<sup>202</sup> V. G. Veselovski et al., *Arkhitektura Sovyetskogo Tadzhikistana*, n.p., 1987, p. 45.

<sup>203</sup> *Ibid.*, p. 46.

<sup>204</sup> Akon, *Āsya merkezi mekan*, pp. 195-7.

<sup>205</sup> George Michell, *The Hindu Temple: An Introduction to Its Meaning and Forms*, Chicago and London, 1988, pp. 71-2, Fig. 27; G. H. R. Tillotson, *The Rajput Palaces: The Development of an Architectural Style, 1450-1750*, New Haven and London, 1987, pp. 80-3, fig. 108; Stella Kramrisch, *The Hindu Temple*, 1, Calcutta, 1946, pp. 21,

32.

<sup>206</sup> Michael W. Meister, M. A. Dhaky, eds., *Encyclopaedia of Indian Temple Architecture: South India, Upper Dravidesa, Early Phase, A.D. 550-1075*, Philadelphia, 1986, figs. 20-2, 26, 27-8; Michell, *The Hindu Temple*, p. 113, fig. 53, 138, fig. 74.

<sup>207</sup> Tillotson, *The Rajput Palaces*, pp. 171-3, fig. 210.

<sup>208</sup> M. Shokoohy, M. Bayani-Wolpert and N. Shokoohy, *Bhadresvar, The Oldest Islamic Monuments in India*, Leiden, 1988, fig. 41.

<sup>209</sup> A. Welch and Howard Crane, "The Tughluqs: Master Builders of the Delhi Sultanate," *Muqarnas* 1, 1983, p. 131, fig. 1.

<sup>210</sup> Ahmad Hasan Dani, *Islamic Architecture: The Wooden Style of Northern Pakistan*, Islamabad, 1410/1989, pp. 144-6, fig. 31.



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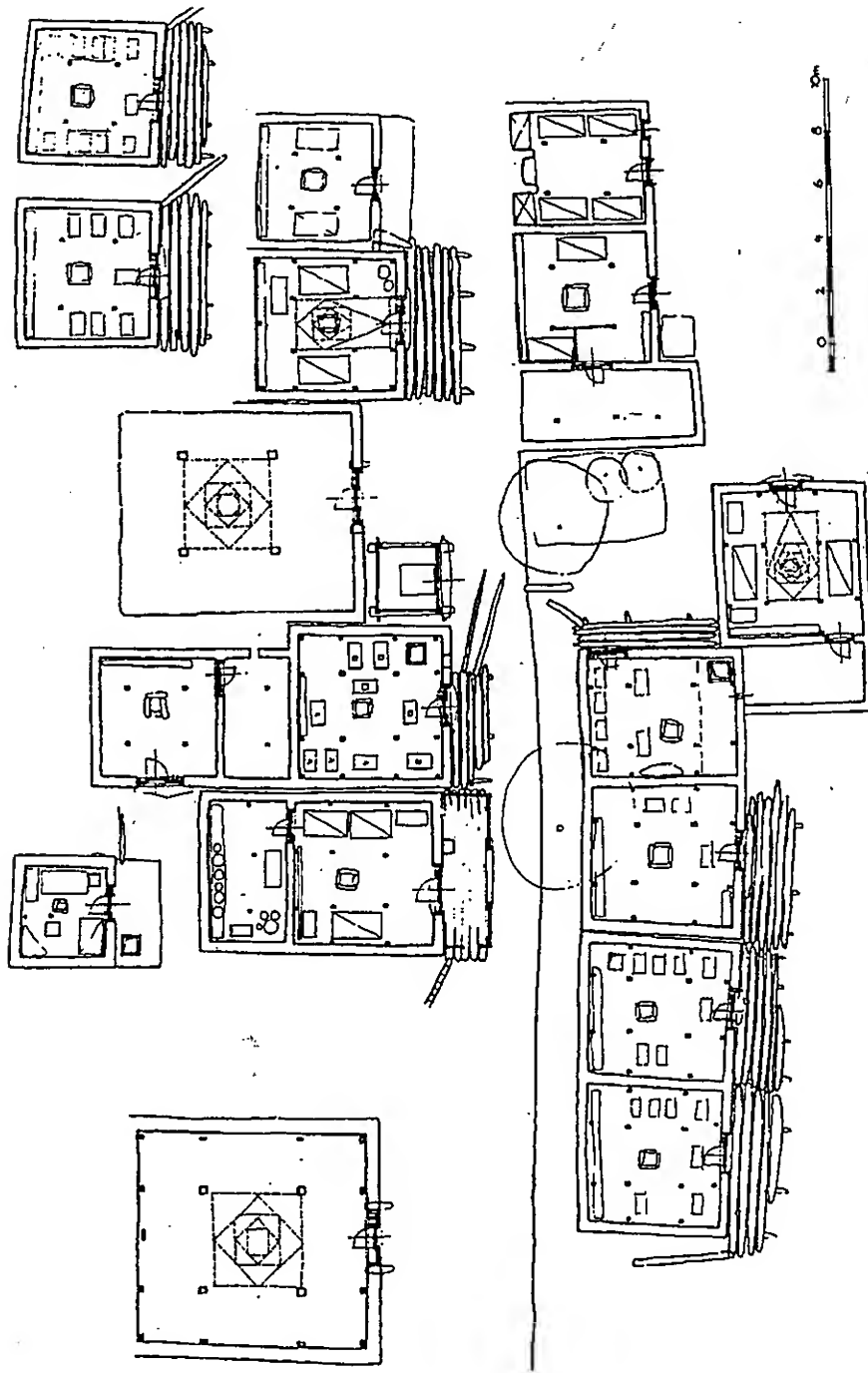


Figure 33 Nūristān, houses (19th-20th century) (after Wutt)

building with the 14th century are credible. Circular wooden columns, corbelled.

*Hisār, palace of Fīrūz Shāh (1356).*<sup>211</sup>

On the east side of the north court is a roughly square room with four piers.

<sup>211</sup> Mahrdād and Natalie H. Shokoohy, *Hasar-i Firuza: Sultanate and Early Mughal Architecture in the District of Hisar, India*, London, 1988, p. 20, fig. 5.

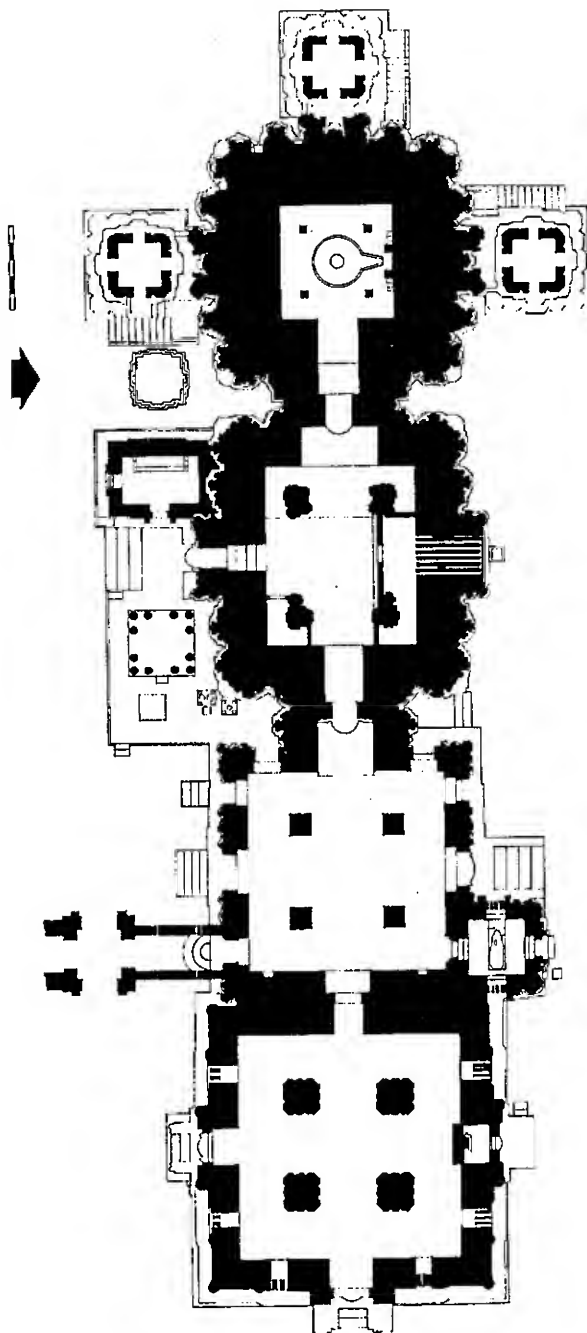


Figure 34 Bhubaneswar, Lingaraja temple  
(11th century) (after Michell)

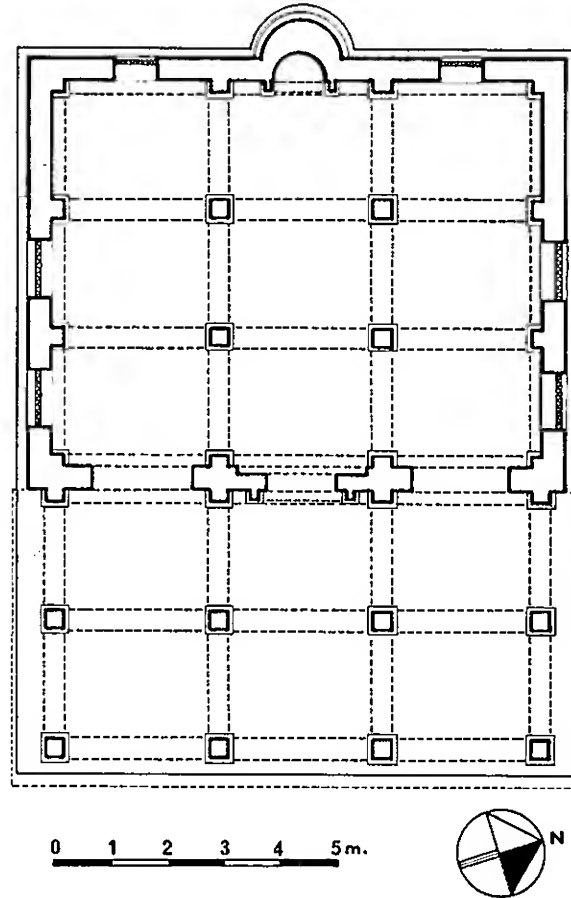


Figure 35 Junagadh, al-Iraji mosque  
(685/1286-7) (after Shokoohy)

*Hisār, Gujari Maḥal (after 1356) (Fig. 36).*<sup>212</sup>

Four reused marble temple columns support cross arcades and nine equal domes on pendentives. There are three entrances on each side.

<sup>212</sup> *Ibid.*, pp. 40-4, fig. 16.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

*Hisār, Jahaz Kothi (madrasa?) (after 1356).*<sup>213</sup>

The main hall on the west of the building has four monolithic columns; each of the nine bays is roofed by cross vaults.

*Delhi, Malcha Maḥal (c. 1360) (Fig. 37).*<sup>214</sup>

This bears a close resemblance to the ideal Hindu palace and temple plan. It consists of nine units, with each of them further subdivided, although only the central one of these nine units is divided into nine bays, the surrounding ones being composed of six or four bays.

*Bengal, Pandua, Adina mosque (14th century).*<sup>215</sup>

This structure, of the qibla side of the mosque, is now a tomb, but is thought to have been originally a royal entrance. Four piers support nine small domes on pendentives.

*Delhi, Bahlul Lodi tomb (1488).*<sup>216</sup>

Three entrances on each side except the qibla, which has two (with a mihrab in the center bay). Quincunx with large central dome and four smaller ones at the corners.

*Madura, 'Alā' al-Din mosque (late 14th or early 15th century).*<sup>217</sup>

In this trabeate building the main prayer hall has nine equal bays supported on four stone columns, preceded by a four-bay narthex.

*Madura, Qaḍī Tāj al-Din mosque (late 14th or early 15th century).*<sup>218</sup>

Trabeate, with a slightly rectangular nine-bay antechamber similar to the prayer hall of the 'Ala' al-din mosque; the inner prayer hall has a nine-bay plan with a rectangular raised central bay.

*Tiruparangundram, shrine of Sikandar Shāh (late 14th or early 15th century) (Fig. 38).*<sup>219</sup>

The plan is virtually identical to the Qaḍī Tāj al-Din mosque immediately above; here the two rooms are square rather than rectangular. Instead of a mihrab in the qibla wall is the entrance to a tomb.

*Calicut, Muchchandipalla mosque (c. 1480).*<sup>220</sup>

This has a plan similar to the 'Alā' al-Din mosque at Madura above; here the columns are spaced quincunx fashion, giving a much larger central bay.

<sup>213</sup> *Ibid.*, pp. 47-51, fig. 19.

<sup>214</sup> *Ibid.*, fig. 10, p. 153.

<sup>215</sup> Catherine B. Asher, "Inventory of Key Monuments," in George Michell, ed: *The Islamic Heritage of Bengal*, Paris, 1984, p. 110.

<sup>216</sup> Ara Matsuo, "The Lodhi Rulers and the Construction of Tomb-Buildings in Delhi," *Acta Asiatica* 43, 1982, Fig. 4.

<sup>217</sup> Mehrdad Shookohy, "Architecture of the Sultanate of Ma'bar in Madura, and Other Muslim Monuments in South India," *Journal of the Royal Asiatic Society*, third series 1/1, 1991, p. 54, Fig. 7.

<sup>218</sup> *Ibid.*, p. 63, fig. 10.

<sup>219</sup> *Ibid.*, p. 68, fig. 11.

<sup>220</sup> *Ibid.*, p. 86, fig. 16.

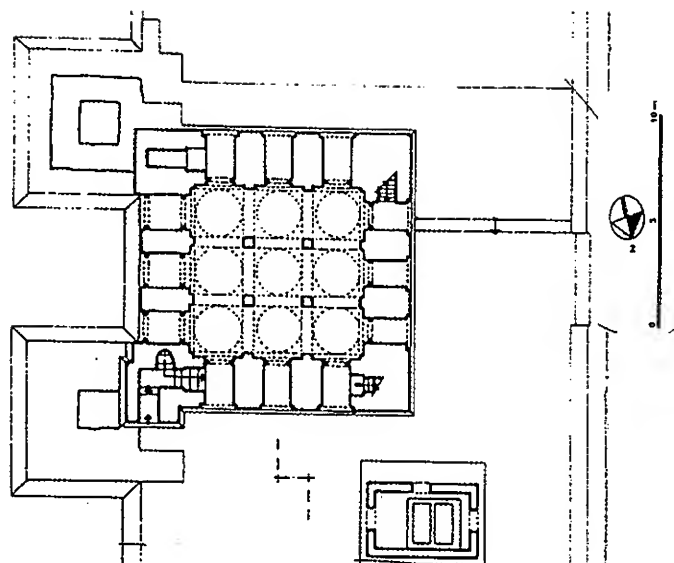


Figure 36 Hissar, Gajari Mahal (after 1356) (after Shokoohy)

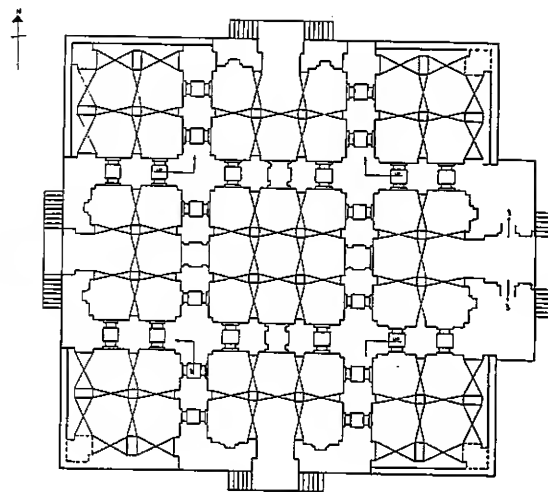
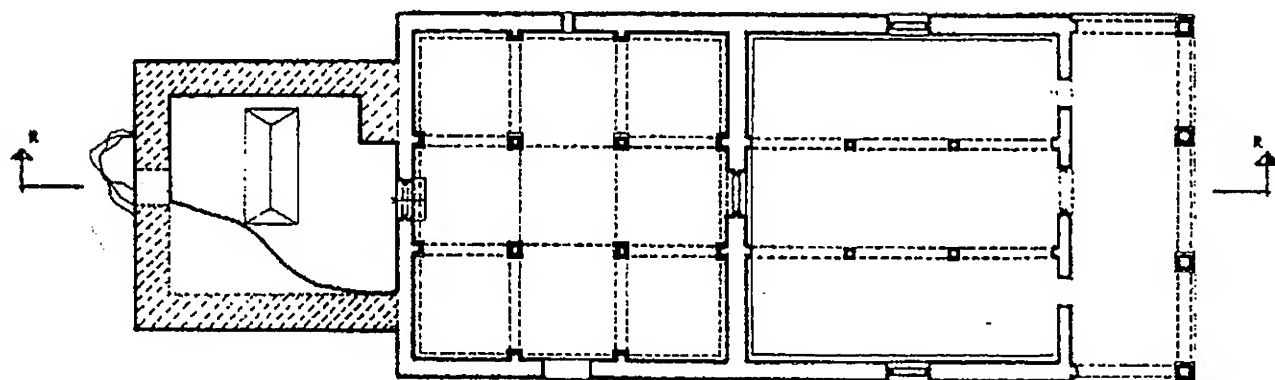


Figure 37 Delhi, Malcha Mahal (after Welch and Crane)



Plan

Figure 38 Tiruparangundram, shrine of Sikandar Shah (later 14th or early 15th century) (after Shokoohy)

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

*Bengal, Bagherat, mosque (mid-15th century).*<sup>221</sup>

Square piers, cross arcades, nine equal domes, three entrances on each side other than the qibla, which has three mihrabs.

*Bengal, Khulna, Mashjidkur mosque (mid-15th century).*<sup>222</sup>

Square piers, cross arcades, nine equal domes, three entrances on each side other than the qibla, which has three mihrabs.

*Bengal, Kawshba mosque, Barisal (Borishal) (mid-15th century).*<sup>223</sup>

Octagonal piers, cross arcades, nine equal domes, three entrances on the side opposite the qibla, two on the sides, three mihrabs on the qibla side.

*Bengal, Shatoir mosque, Farīdpūr (late 15th century).*<sup>224</sup>

Octagonal piers, cross arcades, nine equal domes, three entrances on each side other than the qibla, which has three mihrabs.

*Bijapur, Nau Gumbaz mosque (early 17th century).*<sup>225</sup>

An alternative name for the Hājji Piyāda mosque in Balkh is indeed the Nūḥ Gunbad, i.e. nine dome mosque. Cross arcades support a wider central dome which, like the four corner domes, is segmental, the other being pyramidal.

*Gulbarga, Dargāh of Shaykh Sirāj al-Dīn Junaīdī, gateway (15th or 16th century).*<sup>227</sup>

Cross arcades, nine equal domes.

*Hunza, Altit fort, first and second floors (16th century).*<sup>228</sup>

Each of these reception rooms has four wooden columns. Dani describes them as "a typical Hunza style of sitting-cum sleeping room," suggesting that the Nūristān examples have a long regional heritage.

*Baltistān, Shigar, Mīr Yahyā khānqāh (1023/1647).*<sup>228</sup>

Of the nine bays on the interior, only the central one now has the corbelling which originally covered all of the bays, according to Dani.

*Gulbarga, Afzalpūr, Afzal Khān mosque (before 1071/1659).*<sup>229</sup>

Quincunx, central dome and four elliptical corner domes supported on cross arcades.

<sup>221</sup> Perween Hasan, "Sultane Mosque-Types in Bangladesh: Origins and Development", unpublished Ph.D. dissertation, Harvard University, 1984, pp. 227-230, fig. 195. The author also discusses the relationship of this and the following three examples to earlier nine-bay examples, being the first to discuss the Darb Zubayda examples in this context: 222-6.

<sup>222</sup> *Ibid.*, pp. 231-4, fig. 200; *idem*, "Sultanate Mosques and Continuity in Bengal Architecture," *Muqarnas* 6, (1989, p. 62, fig. 5.

<sup>223</sup> *Ibid.*, pp. 235-7, fig. 203.

<sup>224</sup> *Ibid.*, pp. 238-41, fig. 206.

<sup>225</sup> H. Cousens, *Bijapur and Its Architectural Remains, with an Historical Account of the 'Adil Shāhi Dynasty*, Bombay, 1916, pl. XXXVIII (plan).

<sup>226</sup> E. Merklinger, *Indian Islamic Architecture: the Deccan, 1347-1686*, Warminster, 1981, 110, Plans 13-14, 4 fig. 43 check; King, "Nine Bay," p. 374.

<sup>227</sup> Dani, *Islamic Architecture*, pp. 156-62, figs. 32-3.

<sup>228</sup> *Ibid.*, pp. 126-8, fig. 26.

<sup>229</sup> Merklinger, *Indian Islamic Architecture*, p. 127, Plan 32.

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*Baltistān, Kiris, Mullā khānqāh (1118/1706)(Fig. 39).*<sup>230</sup>

This has an interesting variation on the usual nine-bay plan: The larger central bay is subdivided into four bays by a central column, and each side of this central bay is bordered by three columns, making nine in all. One can see why it was seldom used, however: the central aisle, on the axis from the door, is thus effectively split into two, obscuring the view of the mihrab opposite the entrance. Each of the bays is roofed with corbelling.

*Aḥmadābād, Nana Aidrus mosque (undated) (Fig. 40.14).*<sup>231</sup>

Quincunx plan; no details are available on the vaulting.

### Southeast Asia

*Java, Jatinom, small mosque (first half of the 17th century).*<sup>232</sup>

Trabeate; the main prayer hall is supported by four wooden columns on stone socles.

### Later nine-bay plans: conclusions

It will be obvious that the relationships between the above examples (if any) are extremely varied. Before considering these further, we should remind ourselves of the range of functions in nine-bay plans. To those evident from the period 800-1200 (see above) we can add caravansarays, both urban and rural, and the first Islamic examples of gateways. By far the majority of surviving examples are mosques, but this imbalance probably does not reflect the original distribution of the plan. Of all medieval buildings in the Islamic world mosques are the ones most likely to have survived, whether from endowments through the *waqf* system, or because they were valued and continually maintained by the community.

Being made of wood, no examples of medieval housing in the area stretching from Uzbekistan through Afghanistan to Pakistan have survived. But the late examples that do survive from this area suggest that there may have been continuity between the very numerous examples of pre-Islamic domestic architecture with four-columned rooms and the modern period. It is not surprising to find the plan reflected in the wooden-columned mosques of the area, although again, because of their perishable material, no examples earlier than Vakhshuvar (1713) have survived.

Should one also consider the four-columned tent of the Golden Horde in this context? Tempting as it may be to relate the architecture of the sedentary community to that of the numerous surrounding nomadic tribes, state tents did not have much in common with typical nomad ones, and the practicality and stability of the four-column plan was probably of more importance to those who designed and erected state tents as its palatial parallels.

Another major group within which there is obvious correlation is that of Ottoman quincunx mosques, so large a number that I have listed merely some of the earlier examples. It is not necessary in the case of the great imperial Ottoman mosques to assume a direct derivation from Byzantine quincunxes: the preoccupation of earlier Ottoman architecture with the large dome, and with the gradual encirclement of it by first one, and then two half domes (Fātiḥ, Beyazid) shows that another route was possible (although this other route was also clearly based on Byzantine models like Hagia Sophia). But the presence of models in the many Byzantine quincunx churches within the realm could have made local architects particularly receptive to the plan, as in the case of the numerous Christian and Islamic examples around Diyarbakir. It is also as well to remember the require-

<sup>230</sup> Dani, *Islamic Architecture*, 134-6, fig. 29.

<sup>231</sup> John Burton, "Mosques and Tombs," in *Ahmadabad*, ed. George Michell and Snehla Shah, Bombay, 1988, p. 117, no. 14.

<sup>232</sup> Claude Guillot, "La symbolique de la mosquée javanaise: à propos de la "Petite Mosquée de Jatinom," *Archipel* 30, 1985, pp. 3-20.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

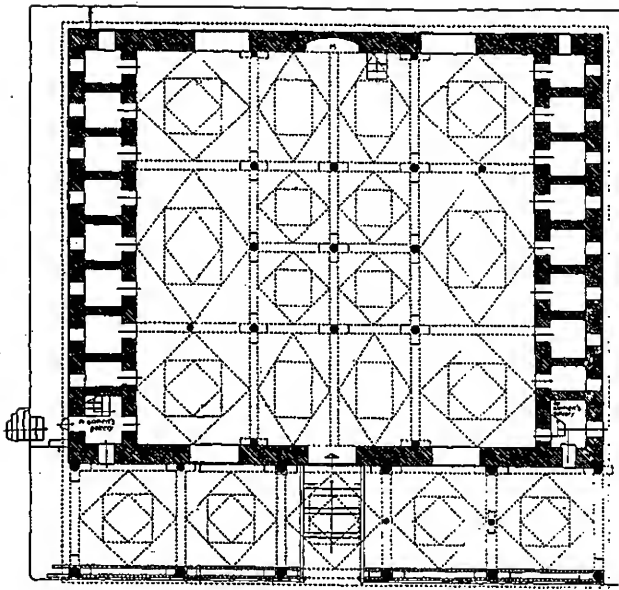


Figure 39 Baltistān, Kīris, Khānqāh-i Mullā (1118/1706) (after Dani)

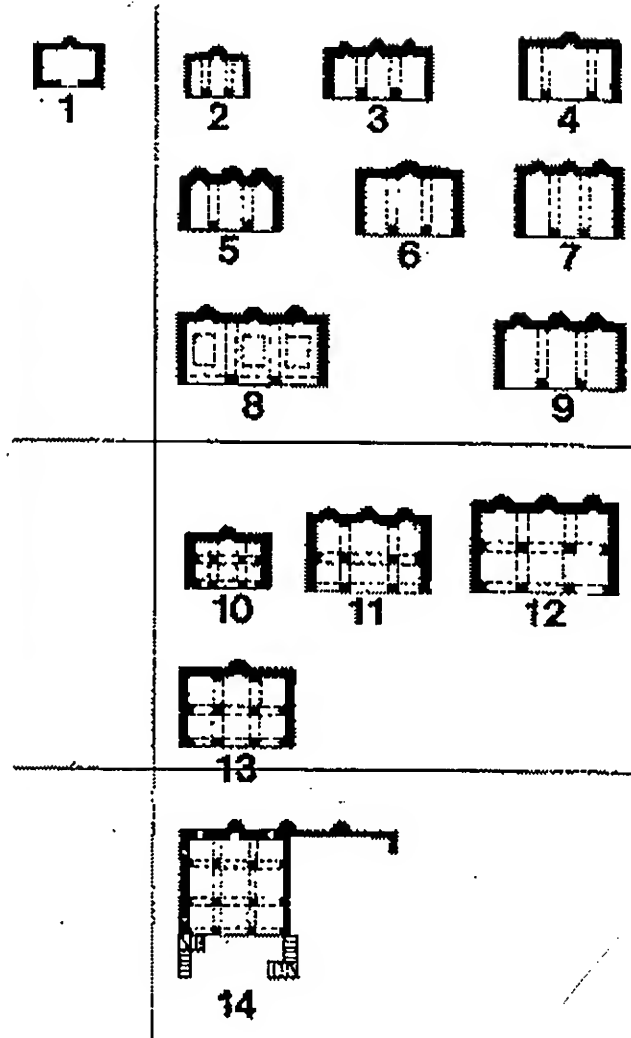


Figure 40 Aḥmadābād. table of mosque plans (after Sohan Nilkanth)

ments of the Ottoman quincunx architect, irrelevant to his Christian counterpart, for a space at ground level as unencumbered by supports as possible, and which therefore need not reflect the complexities of the upper vaulting. In this way they reflect accurately the aims of the earliest trabeate four-columned structures: to roof as large a space as possible with minimal supports.

The East African group shows considerable homogeneity, although the frequency with which architects in mosques not of the nine-bay type placed pillars on the door-mihrab axis<sup>233</sup> makes one wonder just how much thought went into the planning of these buildings. Garlake has characterised the style as "limited in its aims and

<sup>233</sup> Garlake, *Early Islamic Architecture*, figs. 5, 7-8, 13, 34, 38, 41, 50-2, 56-7, 60.

satisfied with a standardized and unadventurous technical competence sufficient only to such aims, never seeking the imaginative or inventive new solution."<sup>234</sup> This is certainly not incompatible with the repeated use of the nine-bay plan.

Another area with obvious interrelationships is the Indian subcontinent. Four-column trabeate mosques are among the earliest (Junagadh) and latest (Kiris) examples of the type, and it may be hard initially to resist the idea that, as with many other features of Islamic architecture in India, Hindu architecture provided a model. The Muslim architect would of course have shrunk in horror at the idea of his mosque being related to a temple, but even with a similar ground plan there was little chance of them being mistaken for each other as, apart from the dearth of figural imagery, the horizontality of the Islamic trabeate examples sets them apart from the vertically piled masses of the temples. But it may be wondered why there is such a gap between the appearance of this plan at Junagadh in 1286 and the late 14-early 15th century examples in southern India. Perhaps architects truly did see the connection, and fearful of just such an accusation of copying temple plans, used trabeate architecture only for larger plans and for nine-bay mosques only arcuate examples which in their spatial qualities are far removed from Hindu architecture. In palaces more leeway was given architects to adapt Hindu models (although see the Khirki mosque below). This should now be evident not only from the Mughal examples of Fathehpur Sikri or the Jāhāngīrī Maḥal at Agra, but also from the Gujari Maḥal at Hīsār and the mandala plan of the Malcha Maḥal. The *maqṣūra* of the Jahānpanāh mosque and the gateway of the Adina mosque at Pandua could also be seen in this context of domestic architecture, rather than as, for instance, a variant of the superficially similar space in the Malik mosque at Kirman.<sup>235</sup>

There is one Indian building with a nine-bay element that I have not included in the table above, the Rajput palace of Govind Mandir at Orchha (c. 1620). Its nine-bay part, a trabeate quincunx, is one of the stories of its imposing central tower and is not particularly significant in itself, but its context does provide a wonderful idea of the relatedness of the nine-bay and *hasht bihisht* plans (Fig. 41).<sup>236</sup> The upper story has a pavilion in the form of a *chahārṭāq* (even, if coincidentally, with diminutive domes at the corner like the Samanid tomb at Bukhara), its corners corresponding to the placement of the piers on the lower stories. These, depending on the openness of the interior, can be nine-bay like the middle story (no. 6 on the plan) or *hasht-bihisht* like the others (nos. 4, 5 and 7 on the plan).

### Table 3: possible derivations of the nine-bay plan

Given that the nine-bay plan is one variation of the hypostyle hall, what variations of it should be considered as offshoots of the nine-bay plan, and what as part of the infinitely flexible hypostyle tradition?

There are three candidates that at first sight can be related to the nine-bay tradition. Take away one aisle and a six-bay plan results, add one for a twelve-bay plan, and if an aisle is added on each side (and squared off) a twenty-five bay plan results. I will consider each of these in turn.

### Six-bay plans

Unless otherwise mentioned, it may be assumed that two piers or columns support six domes of equal size

<sup>234</sup> *Ibid.*, p. 116.

<sup>235</sup> The *maqṣūra* of the Jahānpanāh mosque is popularly termed a *takht* and is rumoured to be the tomb of sultan Sikander Shāh, but this is by no means universally accepted: "Considering its location in the mosque, the position of the four pillars in the interior, and the absence of any trace of a sarcophagus, it is more likely that the building was used as a resting and congregational place for the king and his company before their entry into the *maqṣura* area of the mosque" (Hasan, *Sultanate Mosque Types*, pp. 222-3).

<sup>236</sup> See n. 116 above.



## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

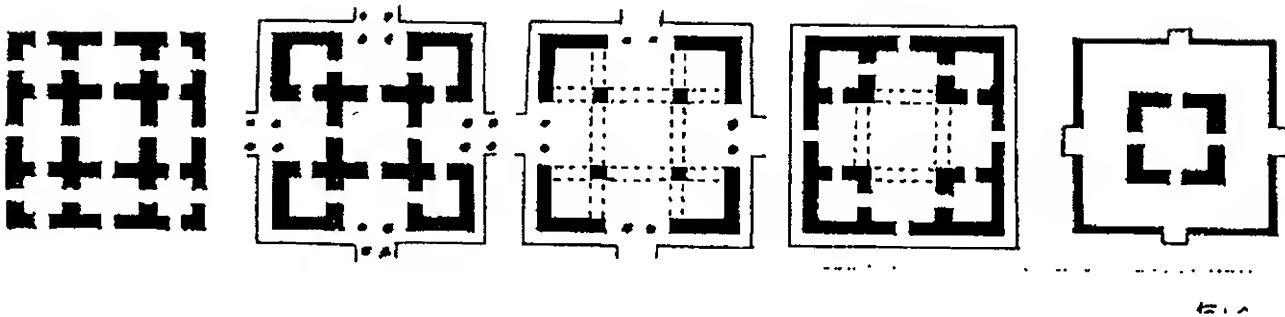


Figure 41 Orchha, Govind Mandir, the five stories of the central tower (c.1620) (after Tillitson)

on cross arcades.

### Maghrib:

*Monastir, Sayyida mosque (11th century).*<sup>237</sup>

Two cruciform piers support six cross-vaulted bays.

### Egypt

*Shillal, Qibli mashhad (before 534/1139).*<sup>238</sup>

### Arabian peninsula

*Ta'izz, Mu'tabiyya complex (before 796/1393).*<sup>239</sup>

*Juban, Manṣūriyya madrasa (1482).*<sup>240</sup>

The six domes are in the main prayer hall.

*Madina, al-Ghumama mosque (19th century?).*<sup>241</sup>

It is not clear whether the present plan with a six-domed prayer hall reflects earlier foundations.

*Mighlaf, al-Ḥaddādiyya, Friday mosque (undated).*<sup>242</sup>

*Al-Munira, Friday mosque, annex (undated).*<sup>243</sup>

<sup>237</sup> Gaston Migeon, *Manual d'Art Musulman. L'Architecture*, Paris 1907, p. 110, fig. 56; Georges Marçais, *L'architecture musulmane d'Occident*, Paris, 1954, p. 77.

<sup>238</sup> Creswell, *MAE*, 1, pp. 148-53; King, "Nine Bay," pp. 374-6.

<sup>239</sup> Noha Sadek, "Patronage and Architecture in Rasulid Yemen, 626-858 A.H./1229-1454 A.D.", unpublished Ph.D. thesis, University of Toronto, 1990, pp. 192-200; King, "Nine Bay," pp. 379-80.

<sup>240</sup> Finster, "Islamic Religious Architecture in Yemen," p. 140, fig. 18.

<sup>241</sup> King, "Nine Bay," pp. 378-9.

<sup>242</sup> Scerrato et al., "Report," p. 434, fig. 69.

<sup>243</sup> *Ibid.*, p. 434, fig. 65.

In addition to the later six-domed annex, the main prayer hall has six domes, although from the plan it looks as if three were added on to the original first group of three.

**Turkey**

*Beyshehir, Eshrefoglu Khān (Beylik period).*<sup>244</sup>

*Istanbul, Zincirlikuyu mosque (late 15th century).*<sup>245</sup>

A three-domed porch is now missing.

*Diyarbakir, Ibrahim Bey mosque (late 15th - early 16th century).*<sup>246</sup>

The two square piers of the prayer hall now support three domes and three cross vaults, but originally would have been domed throughout. Three-domed porch.

*Gelibolu, Khān (16th C?).*<sup>247</sup>

*Diyarbakir: Arab Shaykh mosque (1054-1060/1644-50).*<sup>248</sup>

This is has the same basic form as the Zincirlikuyu in Istanbul (including the porch), but with a barrel-vaulted side extension to the prayer hall.

**Iran/Central Asia**

*Siraf, site C, mosque (9-10th century).*<sup>249</sup>

The two piers, aligned with engaged piers on the walls, probably supported an arcade and a flat roof.

*Lashkar-i Bazar, southern palace, room XXI, mosque (11th century) (Fig. 42).*<sup>250</sup>

A courtyard preceded the triple-arched entry to the prayer hall. The latter was roofed with barrel vaults parallel to the qibla.

*Marand, Friday mosque (17th century?).*<sup>251</sup>

The Saljuq dome chamber here was redecorated in the Ilkhanid period, and a twelve-domed winter mosque built to one side (see below). In the Safavid period five domes were built around the original, forming two rows of three bays. Whether the Safavid domes replaced an earlier construction is not clear.

*Eschkarand ('Ishqarand?'), mosque "C," shabistān (after 1300?).*<sup>252</sup>

Siroux has suggested an earlier date for this, but in the absence of any specific criteria, it may be prudent to place it closer in date to the main mosque on the site.

<sup>244</sup> Ünsal, *Turkish Islamic Architecture*, 55, fig. 26A.

<sup>245</sup> Kuran, *The Mosque*, 159, fig. 172.

<sup>246</sup> Sözen, *Diyarbakır'da Türk Mimarisi*, 118, fig. 34.

<sup>247</sup> Ünsal, *Turkish Islamic Architecture*, 55, fig. 26B.

<sup>248</sup> *Ibid.*, 106-8, fig. 32; Kuran, *Sinan*, 122, fig. 108.

<sup>249</sup> Whitehouse, *Siraf*, 30-9.

<sup>250</sup> Daniel Schlumberger, *Lashkari Bazar: une résidence royale ghaznévide et ghoride*, Mémoires de la Délégation Archéologique Française en Afghanistan, 18, Paris, 1978, 69-70, pl. 4.

<sup>251</sup> Maxime Siroux, "La mosquée djoumeh de Marand," *Arts Asiatiques* 3 (1956), 89-97.

<sup>252</sup> Siroux, *Anciennes voies*, 251-2, fig. 84; idem, "l'évolution," 83, fig. 19.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

*Uba, Friday mosque (832/1420).*<sup>253</sup>

The mosque is more recent than the date of the inscription, but may reflect a more ancient plan.

*Nakhchivan area, annex to Shaykh Khurasan mausoleum (15th century).*<sup>254</sup>

The annex was added to the original late 12 or early 13th century mausoleum.

### Indian Subcontinent

*Dhaka, Mu'azzampūr, mosque (836-9/1432-6).*<sup>255</sup>

*Gulbarga, Langar Ki mosque (c. 837/1434).*<sup>256</sup>

Two barrel vaulted aisles.

*Basirhat, Şāliḥ mosque (871/1466).*<sup>257</sup>

*Dhaka, Mu'azzamābād, Old mosque (1466-7).*<sup>258</sup>

*Jessore, Sailkupa (mid 15th century).*<sup>259</sup>

*Chittagong, Faqir mosque (1474-81) (Fig. 43).*<sup>260</sup>

*Dhaka, Rampal, Bābā Ādam mosque (1483).*<sup>261</sup>

*Gaur, Dhan Chawk mosque (late 15th century).*<sup>262</sup>

*Bagerhat, Reẓāī Khān mosque (early 16th century).*<sup>263</sup>

*Gulbarga, Dargāh of Shaykh Sirāj al-Din Junaīdī, mosque (15th or 16th century).*<sup>264</sup>

*Raichur, Kali mosque (early 16th century).*<sup>265</sup>

<sup>253</sup> Bernard O'Kane, *Timurid Architecture in Khurasan*, Costa Mesa, 1987, cat. no. 11.

<sup>254</sup> Useinov et al., *Istoria arkhitektury Azerbaydzhana*, p. 95.

<sup>255</sup> Hasan, *Sultanate Mosque Types*, pp. 52-5.

<sup>256</sup> Merklinger, *Indian Islamic Architecture*, p. 112, Plan 8.

<sup>257</sup> Syed Mahmudul Hasan, "Classification of Mosques According to Ground Plan," in George Michell, ed: *The Islamic Heritage of Bengal*, Paris, 1984, p.153; Ahmad Hasan Dani, *Muslim Architecture in Bengal, Asiatic Society of Pakistan Publication*, 7, Dhaka, 1961, p. 154.

<sup>258</sup> Hasan, "Classification," loc. cit.

<sup>259</sup> Hasan, *Sultanate Mosque Types*, pp. 56-8. Datable to early 16th century according to Hasan, "Classification," p. 153.

<sup>260</sup> Hasan, *Sultanate Mosque Types*, pp. 59-62.

<sup>261</sup> *Ibid.*, 63-6; Dani, *Muslim Architecture*, p. 155, fig. 14.

<sup>262</sup> *Ibid.*, pp. 67-9.

<sup>263</sup> *Ibid.*, pp. 70-3.

<sup>264</sup> Merklinger, *Indian Islamic Architecture*, p. 110, plan 13.

<sup>265</sup> *Ibid.*, p. 116, plan 17.

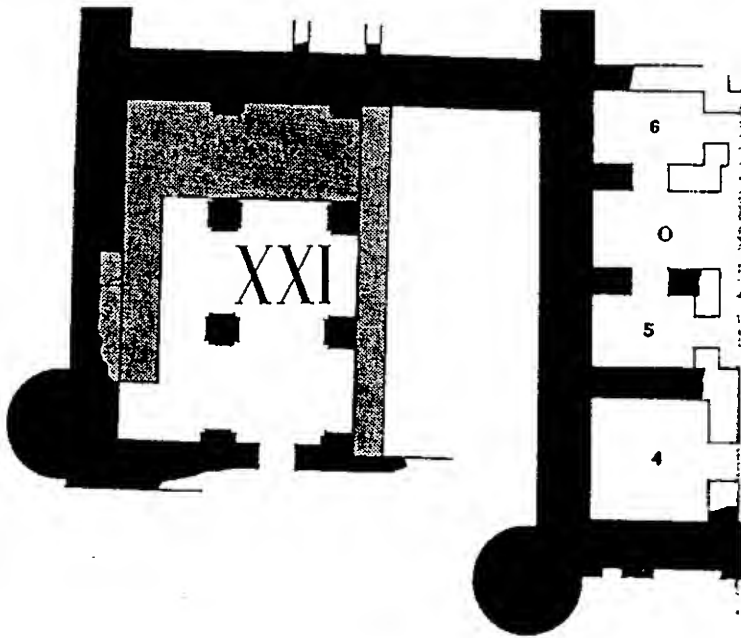


Figure 42 Lashkari Bazar, southern palace,  
room XXI, mosque (11th century, after Schlumberger)

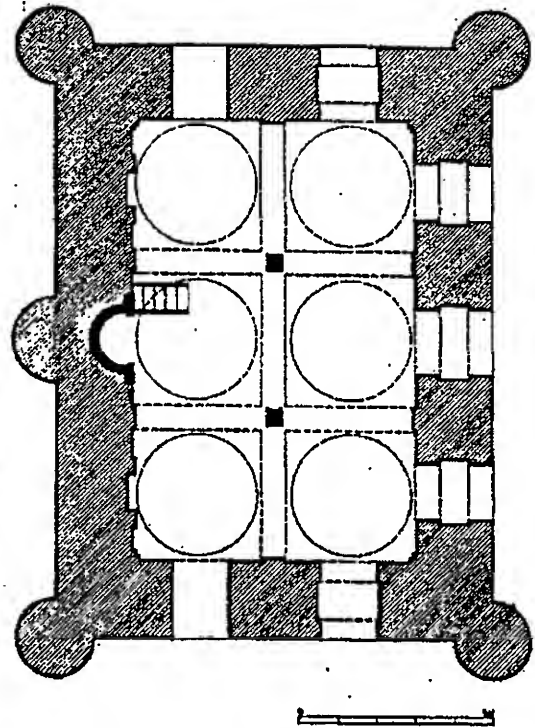


Figure 43 Chittagong, Faqir mosque  
(1474-81) (after Hasan)

*Gaur, Jahāniyān mosque (941/1535).*<sup>266</sup>

*Rājshāhī, Kushumba, mosque (1558).*<sup>267</sup>

*Osmanabad, Naldrug, Fort, mosque (958/1560).*<sup>268</sup>

*Gulbarga, Dornhalli, mosque (978/1570).*<sup>269</sup>

*Belgaum, Sampgaon, Friday mosque (third quarter 16th century).*<sup>270</sup>

*Bidar, tomb of Sultan 'Ali Barīd, gatehouse (1577).*<sup>271</sup>

<sup>266</sup> Asher, "Inventory," p. 76.

<sup>267</sup> Hasan, *Sultanate Mosque Types*, pp. 74-7.

<sup>268</sup> Merklinger, *Indian Islamic Architecture*, p. 120, plan 18.

<sup>269</sup> *Ibid.*, p. 120, plan 22.

<sup>270</sup> *Ibid.*, p. 120, plan 21.

<sup>271</sup> Yazdani, *Bidar: Its History and Monuments*, Oxford, 1947, p. 153, pl. LXXXIX.

## THE NINE-BAY PLAN IN ISLAMIC ARCHITECTURE

*Bijapur, Malika Jāhān Begum mosque (c. 1586).*<sup>272</sup>

*Gulbarga, Yādgīr, Sagar Darwāza mosque (early 17th century).*<sup>273</sup>

*Aḥmadābād area: four mosques, undated (Fig. 40).*<sup>274</sup>

### Southeast Asia

Java, Demak, Agung mosque (early 17th century).<sup>275</sup> The plan, with its four very large central pillars and partially walled nine-bay area, looks as if it may be an enlargement of an earlier nine-bay structure.

### Six-bay plans: conclusions

As the table of Aḥmadābād mosques shows, the number of three-bay (8) and six-bay (4) mosques in the area is substantially more than the single nine-bay example. Even in Bengal, which has one of the highest concentrations of nine-bay mosques (4), there are ten six-bay mosques and, dating from the 15th to the 19th century, a full thirty-nine examples. This suggests that for the Indian subcontinent, at any rate, the six-bay type should be seen as an agglomeration of the smaller units. This, it may be remembered, was also the conclusion reached in studying the Darb Zubayda and Siraf examples above, where the nine-bay mosques betrayed basilical origins, and the four six-bay examples could more easily be connected with the numerous three bay mosques. In Yemen three-bay mosques are also common,<sup>276</sup> and given that the six-bay examples are more numerous than the nine-bay ones, again one can argue that a process of agglomeration rather than reduction is more likely for the six-bay plans there.

With the Ottoman examples it is striking how three of the four incorporate porches with three domes so that the total outline is of a regular nine-bay building. Unlike the areas above, three-bay mosques are not common in Turkey. This also applies to Egypt and Ifriqiyya, where, on the contrary, nine-bay plans are relatively numerous. In the case of these three regions, then, the small number of six-bay buildings could more readily be seen as deriving from the nine-bay examples.

### Twelve bays

Unless otherwise mentioned, it may be assumed that six piers or columns support twelve domes of equal size on cross arcades.<sup>277</sup>

### Egypt

In the examples of nine-bay monuments in Egypt churches whose *naos* was of nine-bays figured prominently. It is but a small step to configure the apse and two adjoining room as the east end of churches as a triple domed area joined on to the nine domes of the *naos*, resulting in twelve domes in all. The coincidence of the

<sup>272</sup> Cousens, *Bijapur*, pl. XXXVIII (plan).

<sup>273</sup> Merklinger, *Indian Islamic Architecture*, p. 150, plan 30.

<sup>274</sup> Reproduced in Burton, "Mosques and Tombs," 117, after an unpublished thesis by Sohan Nilkanth for the School of Architecture, Ahmadabad.

<sup>275</sup> A. Bagoes and P. Wiryomartono, *Seni Bangunan dan Seni Binakota di Indonesia*, Jakarta, 1995, p. 38, Fig. 2-2. I am grateful to Hideo Izumida for bringing this monument to my attention.

<sup>276</sup> E.g., Scerrato et al., "Report," p. 434, lists five (undated) examples.

<sup>277</sup> I have omitted flat-roofed buildings from this account. Many six-columned cubical mosques are known in Yemen, where they have been seen as related to the plan of the Ka'aba.

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number with that of the apostles may be one reason for the dozens of examples of this form that appeared in 18-19th century Egypt, although the transformation from nine to twelve bay form could well have occurred earlier.<sup>278</sup>

### Iran/Central Asia

*Marand, Friday mosque, shabistān (731/1330).*<sup>279</sup>

The portal to the winter prayer hall is dated to the Ilkhanid period.

*Shāpūrābād, Friday mosque (14th century?) (Fig. 44).*<sup>280</sup>

Siroux dates it to the period 8-9th century, but, by his own admission, the tomb of Shaikh Sa'd near Isfahan presents one of the closest parallels to its shell-shaped mihrab. The latter is usually dated to the 14th century.

*Haraz, caravansaray (Safavid).*<sup>281</sup>

### The Twelve-bay plan: conclusions

The plan of the Shāpūrābād mosque shows why it is an exceedingly rare one for mosques: the mihrab is on the long side, and hence has to be off-centre. For the mihrab to be centered the prayer hall must be much deeper than it is wide, a rarely favoured configuration in small mosques.

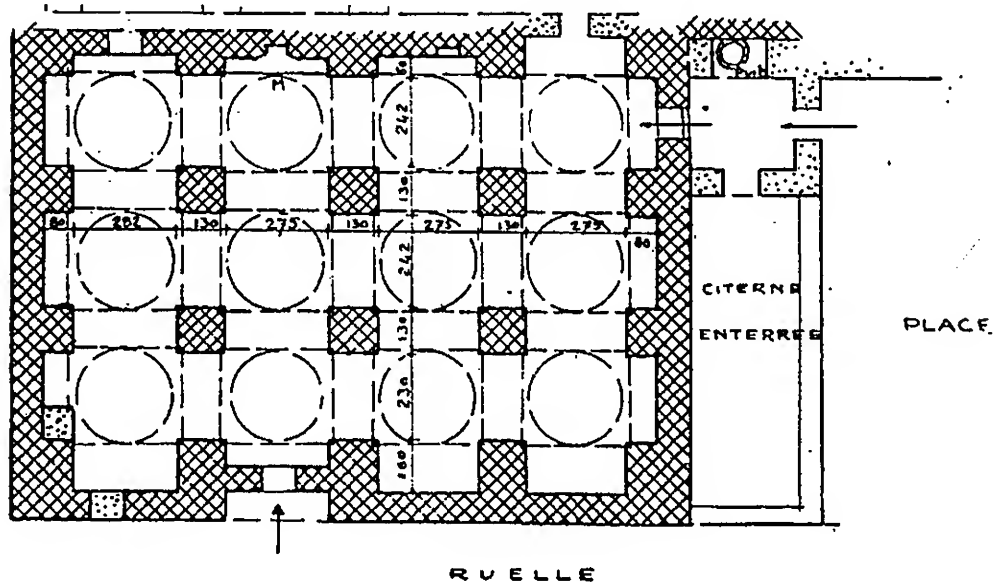


Figure 44 Shāpūrābād, Friday mosque (14th century?) (after Siroux)

<sup>278</sup> The examples can most readily be found in Samuel al Syriani and Badii Habib, *Guide to Ancient Coptic Churches & Monasteries in Upper Egypt*, Cairo, 1990. Most of these have yet to be archaeologically investigated.

<sup>279</sup> Maxime Siroux, "La mosquée djoumeh de Marand," *Arts Asiatiques* 3, 1956, pp. 89-97.

<sup>280</sup> *Idem*, *Anciennes voies*, p. 227, fig. 77

<sup>281</sup> Kiyani and Kleiss, *Karvansarayha-yi Iran*, 1, p. 34.

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In churches, however, the move from nine- to twelve-bay did not alter the basilical character of the space, and could be achieved by a fairly simple change to the apsidal recesses.

### Twenty-five Bays

#### Turkey

Saljuq caravanserais (13th century):

*Dolay han.*

*Ishakli han.*

*Haci Hafiz han.*

*Susuz han.*

*Horozlu han.*

*Sari han.*

*Çinçinli Sultan han.*

*Çay han.*<sup>282</sup>

These all have the requisite number of piers, sixteen, but their basilical origins are evident in the barrel vaults that cover almost all of the interiors. None of them has more than one dome, found at the center if present.

*Suhut, Friday Mosque (818/1414).*<sup>283</sup>

#### India

*Delhi, Khirki Mosque (c. 1352-54) (Fig. 45).*<sup>284</sup>

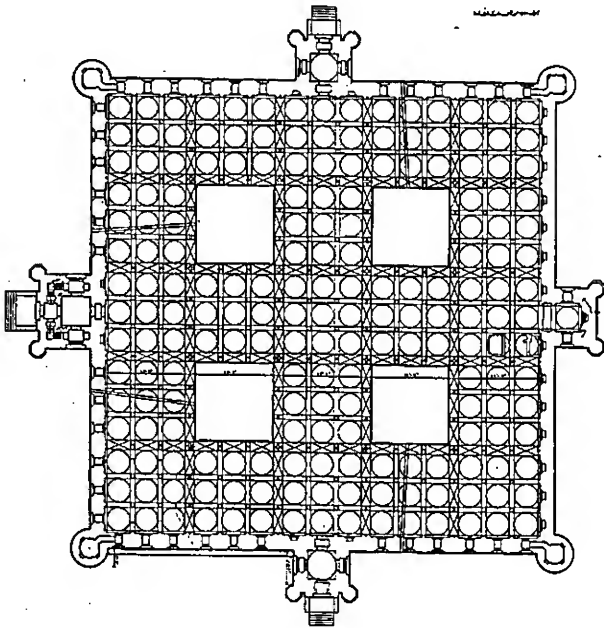


Figure 45 Delhi, Khirki Mosque  
(c. 1352-54) (after Welch and Crane)

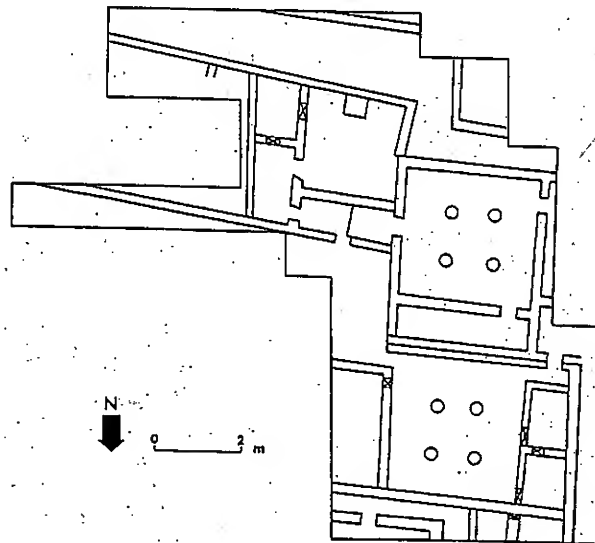


Figure 46 Mexico, Tula, Toltec domicile  
(11th century) (after Diehl)

<sup>282</sup> Kurt Erdmann, *Das anatolische Karavansaray des 13. Jahrhunderts*, *Istanbuler Forschungen* XX/1, 2 vols., Berlin 1961, cat nos. 8, 16-7, 30-1, 35, 37, 39.

<sup>283</sup> *Türkiye'de Vakıf Abideler ve Eski Eserler*, 1, p. 142.

The best way to view this plan is as a twenty-five bay one, with four bays opened for lighting purposes. Each of the remaining covered twenty-one bays is in turn a self-contained nine-bay plan.

In some ways we have kept the best to the last, for this is the ultimate in symmetry, guaranteed to send the nine-bay buff into paroxysms of delight, and such indeed must have been the appeal to its architect. But the result shows how the desire for symmetry can do a disservice to aesthetics. The mihrab bay projects from the main wall of the mosque in such a way as to mirror the entrance units, but, unlike them, its provision for lighting is minimal. The provision of four courtyards within the mosque is again, on paper, a beautifully symmetrical answer to the problem of bringing light into the interior, but only at the cost of casting a tenebrous gloom over what should be the focal point: the axis from entrance to mihrab.

It is hard to think of this plan, a mandala-based religious counterpart to the Malcha Maḥal, being conceived anywhere other than in India.

### Conclusions

The permutations of the nine-bay plan and its relatives (or derivatives) are innumerable, and the uses to which it has been put, if not innumerable, are at least extremely varied, ranging from religious architecture such as temples, churches, mosques, tombs, *zāwiyas* and madrasas to utilitarian buildings—cisterns, baths, refectories, gateways and caravansarays, and finally to residential architecture in all its diversity: tents, living rooms, audience halls and palaces.

The interrelationships between all of these examples are equally varied. Some clear cases of filiation have been remarked upon above, but there is an equally large number that are not clearly connected with other examples. In the vast world of Islam, extending from western Europe to southeast Asia, it is inevitable that local building traditions were conservative in some parts, while in others greater receptivity to outside ideas could emerge. The pre-Islamic architecture of different regions also played a varying roles. With regard to this, it is worth considering the appearance of two four-columned rooms in an area quite outside the Islamic world, at the pre-Columbian site of Tula in Mexico. Among the rooms within a location that has been described as a domicile for priests are two of the above type, one of which may have been a kitchen (Fig. 46).<sup>285</sup> By bringing attention to these I am not trying to give encouragement to the pyramidiologists to find links between Giza and Palenque. What I suggest is that, paradoxically, the more examples of the nine-bay plan that occur over space and time, the less is the likelihood of there being a single origin or meaning for the form, and the greater the possibility that they should be seen as separate cultural developments, spurred by the plan's inherent practicality, economy and aesthetic appeal.

<sup>284</sup> Welch and Crane, "The Tughluqs," fig. 5.

<sup>285</sup> Richard A. Diehl, *Tula: the Toltec Capital of Ancient Mexico*, London, 1983, p. 95.